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All Advertisements intended for insertion in the current Month must e sent to the PUBLISHER OF THE CHEMIST AND DRUGGIST on or before e 12th, except Employers' and Assistants' Advertisements, which can be ceived up to 10 A.M. on the morning previous to publication.

Subscribers are requested to observe that the receipt of THE CHEMIST ND DRUGGIST in a *Green Wrapper* indicates that with that number the rm of subscription has expired, and that no further number will be ent until the same has been renewed. We issue the notice very respectlly, not that we distrust our Subscribers, but simply because we find impossible to keep an immense subscription list like that we now have, xtending to almost every town in the world, in order, without an exact ystem like this.

erms for Advertisements over the Leaders may be obtained on application to the Publisher.

Subscribers residing abroad can remit subscriptions, either by Postffice Order, or order on London houses. Or they may send the currency of heir own country, according to the following tariff:—

ustralasia	10*s.*	India..	5 rupees.
ustria	5 florins.	Italy	11½ lire specie.
avaria	10 marks.	Japan	2½ guldens.
elgium	12½ francs.	Java	6 florins.
razil	5 milreas.	Mauritius	3 dollars.
uenos Ayres ..	2½ dollars.	Mexico	2½ dollars.
anada	2½ dollars.	Norway	9 crowns.
hili	2½ dollars.	Monte Video ..	2½ dols. specie
hina	2½ dollars.	Portugal	2½ milreis.
uba	2½ dollars.	Prussia	10 marks.
emerara	2½ dollars.	Russia	4 roubles.
Denmark	9 crowns.	South Africa ..	10*s.*
France	12½ francs.	Spain..	2½ dols. specie
Germany	10 marks.	Sweden	9 crowns.
Greece	15 drachmæ.	Turkey	50 piastres.
Hamburg	8 marks et.	United States ..	2½ dollars.
Holland	6 guldens.	West Indies.. ..	10*s.*

THE MONTH

Very little business was transacted at the January meeting of the Pharmaceutical Council. The most interesting was the application of Miss Isabella Skinner Clarke, who had lately passed the Major examination, to be elected to membership of the society. A discussion took place on this point, resulting in a division, with the following result:—For admitting the lady —Messrs. Brown, Greenish, Hampson, Savage, Shaw, and Sutton. Against—Messrs. Atherton, Betty, Bottle, Cracknell, Hills, Robbins, and Sandford. Mr. Williams did not vote. Miss Clarke was therefore not elected. The majority generally voted against her for the reason that they considered themselves bound by the decision of the annual meeting in 1873, to which the question of the admission of ladies to membership had been specially relegated. Mr. Sandford and Mr. Atherton appeared, however, still opposed to such admission on first principles. Some modifications in respect to the prizes offered annually by the council were agreed to, two new medals (silver and bronze) being now offered for competition as 2nd and 3rd prizes (the Pereira medal being the first) to all successful candidates for the Major in the session immediately preceding provided that he be at the time of passing his examination an associate of the society. Mr. Greenish was anxious that the Pereira medal should be given as a reward for original research, but his suggestion was overruled. The Secretary of the Irish Pharmaceutical Society had sent a reply to Mr. Bremridge's letter, stating that the Irish council had not authorised the issue of the circulars to which reference was made, and referring to Parliamentary reports as to arrangements for examination.

At the December examinations a lady, Miss Isabella Skinner Clarke, passed the Major, and thus became the first lady "pharmaceutical chemist" in Great Britain. We believe Miss Clarke intends to conduct a pharmacy in the West End. It should be added that she has studied for all her examinations at the South London School of Pharmacy, and has been successful on each occasion that she has presented herself.

The death of the Earl of Aldborough has been announced. This is the nobleman whose testimonial to the efficacy of Professor Holloway's medicines was some twenty years ago so strong an incentive to their sale. The Earl died in Spain, at the age of 67.

An explosion occurred on Monday last at the shop of a chemist named Ford, in Elgin Street, Hereford. The assistant, Evans, had occasion to open a benzoline can to serve a customer, and it is supposed that the vapour of the spirit caught fire at the gas which was burning in the shop. The benzoline immediately exploded, and the shopman, in attempting to rush out with the can, was severely burnt. The windows were blown out, the room above the shop and the rooms behind were severely damaged, but the city engines were at once on the spot, and the fire was soon subdued.

At the Chemical Society, on January 20, at 8 P.M., papers will be read "On Narcotine, Cotarnine, and Hydro-cotarnine," by G. H. Beckett and Dr. Wright; "On a Method for Estimating Bismuth Volumetrically," by M. M. Pattinson Muir.

At the meeting of the German Chemical Society at Berlin, on October 25, Professor Hofmann in the chair, five foreign members were elected, among them Mr. John Moss, of Stockwell, London.

The "Daughter of the late John Bond," represented by Mr Hickisson, has gained a victory in the High Court of Justice over some one named Murphy, who had purchased a chemist's business from the dear departed's brother's widow's son, and who therefore felt himself justified in imitating a little too closely the plaintiff's labels.

The Pharmaceutical Society has prosecuted a beerhouse keeper for selling a sheep-dipping composition containing arsenic. The judge seemed very reluctant to convict, but the law was too strong for him.

An important caution is suggested by a sad case of poisoning reported in this journal. A death seems to have resulted from taking some prussic acid in mistake for a solution of chloral, both liquids being kept in a poison cupboard and in similar bottles.

A chemist at Liverpool has been fined under the Sale of Food and Drugs Act for selling lime juice much below standard. It was at first assumed that the juice had been diluted, but it seems pretty clearly established that it had deteriorated by the slow decomposition to which that article is particularly liable. Chemists must be careful to have their lime juice fresh, and to watch its condition.

The health committee of the Sheffield Town Council deserves the hearty reprobation both of the trade and of the public. It has published a report vaguely indicating that the meanest system of fraud is prevalent to some extent in the dispensing of prescriptions by chemists and druggists. At the same time it declines to bring these assertions to proof in a court of justice. The London and provincial press has snapped at this item of news, and, accepting it as an unquestionable truth, has eagerly branded the trade generally. The report is a surprise to dispensers no less than to the public, and if it be an accurate one, it most decidedly offers cases requiring prosecution. We trust the indignation will not be allayed until the Sheffield Council has justified or retracted its most injurious assertions.

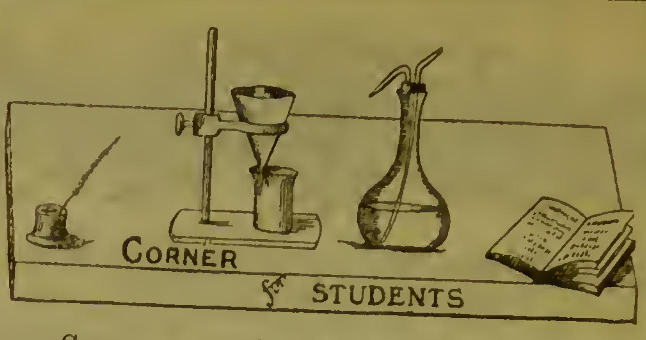
A curiously interesting table compiled from census returns, in combination with those of the Registrar-General has been lately brought forward by Dr. B. W. Richardson, and is reproduced on a subsequent page. Among the facts indicated by it is the somewhat high death rate of chemists. Taking the standard death rate at 100, chemists and druggists appear at 110, while manufacturing chemists figure for 124. Grocers, on the other hand, are nearly at the top of the list, their average being only 76.

The regulations in respect to the registration of trade-marks were issued on December 30. As will be seen by the abstract we publish, the cost of registering one trade-mark will be 2*l.*, plus a certain sum for advertising application as the registrar may direct. This registration will stand good for fourteen years, when the fee must be again repeated. For one fee a trade-mark can only be registered for a special article, but reduced fees are charged if it be applied to other articles also. It will be seen, however, that it will be impracticable under this Act to register a general trade-mark such as is used by so many of our readers. The Commissioners have not yet advertised any applications, and we believe they have not decided on the mediums to be selected. It is to be hoped that they will take care that applications shall have the utmost publicity attainable among the trades interested.

The "Year-Book of Pharmacy" appeared a little before Christmas, and seems to command universal approbation. The association now numbers nearly 3,000 members, and its Transactions and Year-Book are a glory to British pharmacy.

The Privy Council has not yet formally sanctioned the Irish examination scheme, though, it should be added, it has not refused its sanction. At the last council meeting a communication was received from the Privy Council in respect to the byelaws. The law officers are decidedly of opinion that the Act contemplated the ultimate establishment of two classes of dispensers in Ireland, and therefore suggested that the recent arrangement of one grade should only be in force for the present.

A young lady at Exeter died last week through taking an overdose of "Hunter's solution of chloral." According to the medical evidence at the inquest she seems to have taken equivalent to 125 grains of chloral within two hours, with the object of relieving pain. Another lady, the wife of the rector of Orton, near Carlisle, died last month through taking an overdose of morphia.



Conducted by Richard J. Moss, F.C.S.

THE subject of the next exercise will be one of the chemica compounds of the Pharmacopœia. It is to be subjected t such a chemical examination as is required to detect the metalli and acid radicals that may be present; the name of the substance is to be ascertained, and a report made as to its purity.

Students who wish to compete should send us their name and addresses before the 20th inst. On the 25th we shall forward the samples.

Students' papers will be received up to February 15.

Answers.

The powder distributed for analysis in November consisted of calcium and magnesium carbonates in equal quantities. In addition to the constituents of these salts it contained, as impurities, traces of iron (triad), aluminium, and silica, with the sulphuric, phosphoric, and hydrochloric radicals. The chief constituents of the powder being easily detected, the only difficulty the analysis presented was in the detection of the impurities, which were present in small quantity. It must not be supposed, however, that any extraordinary dexterity was required to find them; on the contrary, when it is distinctly understood that impurities are to be sought for, we are surprised to find that easily detected substances ever escape notice at all. The failure of some of our contributors is doubtless due to the use of too dilute solutions. The following experiment will show the necessity there is for attention to this point. One gramme of the mixed carbonates was treated with 100 c.c. of warm water. To a small portion of the liquid, after filtration, hydrochloric acid and barium chloride were added; a slight turbidity was produced after a few seconds. Another portion, with nitric acid and silver nitrate, showed such a slight cloudiness that hydrochloric acid might almost be pronounced absent. A third portion, to which ammonia and sodium phosphate were added, produced a crystalline precipitate only after the lapse of some time. The remainder of the aqueous solution was now evaporated down to one-tenth of its volume, and tested as before: there was an immediate precipitate with barium chloride, and with sodium phosphate, while silver nitrate produced a decided turbidity. There could be no doubt about the results.

Those students who continue to favour us with long-winded dissertations on things in general must have a curious notion of what constitutes a good chemical analysis; according to their ideas, seven or eight pages of foolscap closely written must surely carry off the prize. As a matter of fact the length of a paper has nothing whatever to do with its value in our estimation, although experience has shown that the merit of a paper is generally inversely proportional to its length. It is by the accuracy of the work done that we judge. It would appear that those who can do good work do not care to spend their time in writing long articles about it; while on the contrary others find it easier to write a glowing account of the production of a precipitate than to find out what the precipitate consists of. A student of the latter class occasionally gives us details of the deepest interest concerning the frame of mind he was in at the time, how he first thought there was no precipitate produced, then concluded there was, and that it consisted of alumina, then changed his mind and thought it was a phosphate, and finally came to the conclusion that it might be silica. Then follows a touching account of the last moments of a test tube which had too soon gone the way of all glass—valuable matter, no doubt, but after reading this sort of thing for a few years it really does become monotonous. A single page of foolscap will usually afford space enough for an accurate account of the work done. The prize paper for this month is written on one side of a sheet of letter paper.

Prizes.

The First Prize has been awarded to Charles Thompson, 16 Gallowtree Gate, Leicester, who obtained the second prize in November.

The Second Prize has been awarded to C. J. Bennett, 14 Waterloo Road, Widnes, Lancashire, who carried off the first prize in November.

Marks awarded for Analyses.

Charles Thompson (1st prize)	100
C. J. Bennett (2nd prize)	98
Non Nullus	97
J. L. W.	96
H. R. Arnold	95
H. J. Jackson	91
Enitar	90
Excelsior	88
Cyanogen	86
W. J. P.	83
Joan	82
F. W.	82
H. Arnold	80
Juvenis	78
Fortuna	78
Delta	75
Eucalyptus	70
Patentia	68
Nemesis	26

TO CORRESPONDENTS.

⁂ All Communications should include the names and addresses of the writers.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

C. Thompson.—You deserve to be congratulated, as the competition was very close indeed.

Non Nullus.—The molybdate precipitate indicates a much smaller quantity of phosphoric acid than you suppose. It contains only three per cent. of phosphoric anhydride. We are glad to learn that our hints have assisted you.

H. J. Jackson.—The small portion dissolved by water consisted almost entirely of magnesium sulphate. From what we have said about the impurities you will observe that only the most ordinary precautions were required in testing for the sulphuric radical.

W. J. P.—It is remarkable that so little of your voluminous report referred to the acidulous radicals, three of which you failed to detect. Can you not manage to condense your observations, say into about one-sixth of the space.

Joan.—You remark that the acid solution did not give a precipitate with ammonia and ammonium sulphide: if you had examined it more closely you might have noticed that the change of colour was due to a very finely divided precipitate in small quantity.

F. W.—A decided residue remained when the substance was treated with hydrochloric acid: you appear to have overlooked this in consequence of having examined the residue from acetic acid in the filter.

H. Arnold.—The bulk of precipitates cannot always be relied upon as approximate quantitative tests. The magnesium phosphate precipitated from a given weight of magnesium carbonate is heavier and much more bulky than a corresponding weight of calcium carbonate.

Delta.—Magnesium is not the only metal which yields an insoluble phosphate, nor is calcium the only metal which yields an insoluble oxalate: consequently your conclusions are only correct by accident.

Eucalyptus.—You cannot expect to get much credit for statements utterly unsupported by evidence.

Patentia.—Dolomite is not an official substance; moreover, a mixture of calcium and magnesium carbonates is not necessarily dolomite.

Nemesis.—We cannot account for your failure in detecting magnesium. Try a more amiable goddess.

THE REGISTRATION OF TRADE-MARKS.

THE official rules were published on December 30, and are obtainable *in extenso* from the various law publishers at one shilling.

The office is situated in Quality Court, 47 Chancery Lane.

Printed forms are supplied by the law stationers for the various applications to the registrar, which may be delivered by hand or sent through the post, but must in all cases be accompanied by the proper fees, either in post office orders payable to the registrar at the General Post Office, or, if more than five pounds, they may be paid by cheque payable to the same or bearer, and crossed "Bank of England."

For the purposes of registration all goods are divided into 50 classes, as follows, it being noted that the special substances named are given by way of illustration, and not as an exhaustive list of the contents of a class:—

1. **Chemical Substances used in Manufactures, Photography, or Philosophical Research.**—Such as acids, including vegetable acids, alkalies, artists' colours, pigments, and mineral dyes.

2. **Chemical Substances used for Agricultural and Horticultural Purposes.**—Such as artificial manure and sheep washes.

3. **Chemical Substances used in Medicine and Pharmacy.**—Such as tinctures, extracts, barks, patent medicines, and cod-liver oil.

4. **Raw Vegetable and Animal Substances used in Manufactures.**—Such as resins, oils, dyes, tanning substances, fibrous substances (*e.g.* cotton, hemp, flax, jute), wool, silk, cork, seeds, glue, bone, and sponge.

5. **Unwrought and Partly Wrought Metals used in Manufacture.**—Such as iron and steel, pig or cast, rough iron, bar and rail iron, including rails for railways, bolt and rod iron, iron sheets, and boiler and armour plates, iron hoops, iron wire, pig lead, rolled lead, sheet lead, copper, and zinc.

6. **Machinery of all kinds, and Parts of Machinery, except Agricultural Machines and Implements included in Class 7.**—Such as steam engines, boilers, pneumatic machines, hydraulic machines, locomotives, sewing machines, weighing machines, machine tools, mining machinery, and fire engines.

7. **Agricultural and Horticultural Implements and Machines.**—Such as ploughs, drilling machines, reaping machines, threshing machines, drainage implements, dairy implements, garden implements, cider presses, and beehives.

8. **Philosophical Instruments, Instruments and Apparatus for Useful Purposes, or for Teaching.**

9. **Musical Instruments.**

10. **Horological Instruments.**

11. **Surgical Instruments and Apparatus.**

12. **Cutlery and Edge Tools.**—Such as knives, forks, scissors, shears, files, saws, corkscrews, tweezers, and button-hooks.

13. **Metal Goods not included in other Classes.**

14. **Goods of Precious Metals (including Aluminium, Nickel, &c.), and Jewellery, and Imitations of such Goods and Jewellery.**—Such as plate, clock cases, pencil cases, Sheffield and other plated goods, and gilt and ormolu work.

15. **Glass.**—Such as window and plate glass, painted glass mosaic, and glass for optical purposes.

16. **Porcelain and Earthenware.**—Such as china, stoneware, terra-cotta, statuary porcelain, tiles, and bricks.

17. **Manufactures from Mineral and other Substances for Building or Decoration.**—Such as cement, plaster, and imitation marble.

18. **Engineering, Architectural, and Building Contrivances.**—Such as diving apparatus, warming apparatus, ventilating apparatus, filtering apparatus, lighting contrivances, drainage contrivances, and electric bells.

19. **Arms and Military Stores, not included in Class 20.**—Such as cannon, small-arms, fowling-pieces, swords, shot and other projectiles, camp equipage, military equipments, and military accoutrements.

20. **Explosive Substances.**—Such as gunpowder, gun cotton, dynamite, fog-signals, percussion caps, fireworks, and cartridges.

21. **Naval Architectural Contrivances and Naval Equipments.**—Such as boats, anchors, chain cables, windlasses, rigging, and logs.

22. **Carriages.**—Such as railway carriages, waggons, railway trucks, and velocipedes.

23. **Cotton Yarn and Thread.**

24. **Cotton Piece Goods of all kinds.**

25. **Cotton Goods not included in Classes 23, 24, or 38.**

26. **Linen and Hemp Yarn and Thread.**

27. **Linen and Hemp Piece Goods.**

28. **Linen and Hemp Goods not included in Classes 26 and 27.**

29. **Jute Yarns and Tissues, and other articles made of Jute.**

30. **Silk, Spun, Thrown, or Sewing.**

31. **Silk Piece Goods.**

32. **Other Silk Goods not included in Classes 30 and 31.**

33. **Woollen and Worsted Yarns.**

34. **Woollen Cloths and Worsted Stuffs.**

35. **Woollen and Worsted Goods not included in Classes 33 and 34.**

36. **Carpets, Floor-cloth, and Oil-cloth.**—Such as drugget, mats and matting, and rugs.

37. **Leather, and Skins Unwrought and Wrought, and Hair and Feathers.**—Such as saddlery, harness, portmanteaus, furs, bristles, haircloth, wigs, and hair mattresses.

38. **Articles of Clothing.**—Such as hats of all kinds, caps and bonnets, hosiery, gloves, boots and shoes, and other ready-made clothing.

39. **Paper (except Paper Hangings), Stationery, Printing and Book-binding.**—Such as envelopes, sealing wax, pens (including steel pens), ink, playing cards, and blotting cases.

40. **Goods Manufactured from Indiarubber and Gutta-percha not included in other Classes.**

41. **Furniture and Upholstery.**—Such as paper hangings, papier-mâché, mirrors, and japan goods.

42. **Substances Used as Food.**—Such as cereals, pulses, oils, hops, malt, dried fruits, tea, spices, sago, salt, starch, sugar, preserved meats, honey, confectionery, biscuits, oil cakes, &c., pickles, and vinegar.

43. **Fermented Liquors and Spirits.**—Such as beer, cider, wine, whisky, and liqueurs.

44. **Mineral and Aerated Waters, Natural and Artificial.**

45. **Tobacco, whether Manufactured or Unmanufactured.**

46. **Seeds for Agricultural and Horticultural Purposes.**

47. **Candles, Illuminating Oils, Matches, and Common Soap.**

48. **Perfumery (including Perfumed Soap).**

49. **Toys, Games of all Kinds, Archery, Fishing Tackle.**

50. **Miscellaneous,** including—1. Goods manufactured from ivory, bone, wood, not included in other classes; 2. Goods manufactured from straw or grass, not included in other classes; 3. Goods manufactured from animal and vegetable substances, not included in other classes; 4. Tobacco pipes; 5. Umbrellas; 6. All goods not included in the foregoing classes.

General Note.—Any wares made of mixed materials (for example, of both cotton and silk) shall be included in such one of the classes appropriated to those materials as the registrar may decide.

In case of doubt as to the class to which goods belong, the registrar will determine.

A person may register for one article only, or by paying supplementary fees [see table below] may extend the trade-mark to other goods in the same or other classes.

Fees.

The second schedule states that the following fees shall be payable to the registrar:—

	£	s.	d.
1. On application to register one trade-mark for one or more articles included in one class	1	0	0
2. On application to register more than one trade-mark for one or more articles included in one class, for each additional trade-mark after the first	0	10	0
3. On application to register a trade-mark in respect of goods in different classes, for every class after the first to which such trade-mark is extended, an additional fee of..	0	2	0
4. For registration of one trade-mark	1	0	0
5. Where the same person is registered at the same time for more than one trade-mark, for registration of each additional mark after the first	0	10	0
6. Where the same person is registered at the same time for the same trade-mark in respect of goods in different classes, for the registration of one mark in each class after the first an additional fee of	0	2	0
7. For entering notice of opposition	2	0	0
8. For registering subsequent proprietor	1	0	0
9. For altering address on the register	0	5	0
10. For every entry in the register of a rectification thereof or an alteration therein, not otherwise charged	0	10	0
11. For continuance of mark at expiration of fourteen years ..	2	0	0
12. Additional fee where fee is paid within three months after expiration of fourteen years	1	0	0
13. Additional fee for restoration of trade-mark when removed for non-payment of fee	2	0	0
14. For certificate	1	0	0
15. For inspecting register, for every quarter of an hour	0	1	0
16. For office copy of documents, 2*d.* per folio, but never less than	0	1	0
17. Settling a special case by registrar	2	0	0

NOTE.—If a copy of a trade-mark is required for any purpose, such copy shall be supplied by or at the expense of the applicant.

Forms for application are provided which vary somewhat in the wording, according as the applicant wishes to register for one or more goods. [The rules give the wording in each case, and it is stipulated that all applications, &c., shall be on foolscap paper, 13 inches by 8 inches. Skeleton forms, however, are already provided by the law stationers and patent agents.]

A drawing or other representation of the trade-mark, not less than three inches square, on foolscap paper the size of the form of application (13 inches by 8 inches), or a representation of the same pasted on the paper, accompanied with a description of the trade-mark, is to be attached to the application for registration.

Where a drawing or other representation or specimen cannot be given in manner aforesaid, a specimen or copy of the trade-mark may be sent, either of full size or on a reduced scale, and in such form as may be thought most convenient.

The registrar may, if dissatisfied with the representation of a trade-mark, require a fresh representation either before he proceeds with the application or before he registers the trade-mark.

The registrar may also, in exceptional cases, deposit in the Patent Museum a specimen or copy of a trade mark which cannot conveniently be placed on his register, and may refer thereto in his register in such manner as he thinks advisable.

A declaration (for which forms are also provided) is also to accompany the application, declaring that, to the best of the applicant's knowledge and belief, he is lawfully entitled to use the trade-mark. The registrar will acknowledge each application.

Advertising the application will be the next form. This is to be done by the applicant "during such time, and in such form, and generally in such manner as the registrar may think desirable." The official paper in which such advertisements are to appear will be some paper published under the direction of the Commissioners of Patents, or such other paper as such Commissioners may from time to time direct. The applicant is to supply for such advertisements a wood block or electrotype of the trade-mark of such dimensions as shall be required.

Within three months from the appearance of the first advertisement notice of opposition may be sent to the registrar. Such notice is to be in specified form, to detail grounds of opposition, to be sent in duplicate and to be accompanied by the necessary fee.

One copy of this notice of opposition is to be sent by the registrar to the applicant. Within three weeks he is to prepare and send to the registrar a counter statement of the grounds on which he relies for his application. Failing this he will be deemed to have withdrawn his application.

On receipt of such counter statement, the registrar will require the opponent to give security to such amount as he may think fit for costs; if this security be not forthcoming within fourteen days after the requirement thereof the opposition will be deemed to be withdrawn.

After three months' probation the registrar may register the trade-mark, the registration to be dated as on the day of application.

In cases of identity of trade-mark, or approximate identity, in respect of the same goods, or goods belonging to the same class, the registrar shall use his discretion as to registering all or any of such trade-marks, either unconditionally or on the condition of the introduction of such variations (if any) or otherwise as he thinks fit, or the registrar may, if in any case he thinks it expedient, submit or require the claimants to submit their rights to the court.

Where a trade-mark has been already registered in respect of any goods or description of goods belonging to one particular class, or of goods which may be considered as belonging to two or more classes, a trade-mark identical th such trade-mark, or so nearly resembling the same as be calculated to deceive, shall not, without leave of the urt, be registered in the name of another person as proietor thereof with respect to any goods in that or the ler class.

Forms are further provided for the transference or assignent of a trade-mark from one proprietor to another.

The separate members of a firm owning a registered tradeark may, if all of them consent, but only on that condition, be gistered individually as separate proprietors of the trade-mark, payment of the prescribed fee.

The registration will continue in force for fourteen years. ear the expiration of that time the registrar will give official otice to the registered proprietor. The latter may then pay certain fee (see above) for the renewal of the registration. A igher fee is fixed if the renewal is not applied for until within ree months after the expiration of the fourteen years. The me of grace having expired it will be at the option of the ommissioners of Patents whether the registration shall be estored. If they allow it an extra fee still will have to be aid. If not renewed the trade-mark will not be allowed be infringed for five years from the date of expiration.

Provision is made for the inspection of the register and for opies of descriptions on payment of certain fees.

The court may, on the application of any person aggrieved, emove any trade-mark from the register after the expiration f five years from the date of the registry thereof, on the round that the registered proprietor is not engaged in any usiness concerned in the goods with respect to which such rade-mark is registered.

A registered proprietor of a registered trade-mark may, by cave of the court, alter his trade-mark, so that he do not alter ny of the essential particulars of a trade-mark, as specified by he Act.

On the subject of trade-marks Mr. Rimmel writes the following sensible letter to the *Journal of the Society of Arts*:—

"I consider the great fault of the new Act is to extend the denominations of trade-marks far beyond their natural and requisite limits. The chief object of a trade-mark is to distinguish certain articles which by their nature cannot bear any other recognisable sign, or which dealers object to sell with the manufacturer's name for fear of disclosing the source of their supply. Whenever a manufacturer is allowed (as in our trade, for instance) to display his name and address in full on his wares, they are sufficiently protected from imitations by common law to require no further legislation. If he chooses to use a trade-mark in addition, it is a matter of fancy or of advertisement, but is of no practical utility either to himself or to the consumer. I conclude, therefore, that it would considerably lessen the difficulties of classification and protection if trade-marks could be confined to articles which do not or cannot bear the manufacturer's name, without encumbering the working machinery with an immense quantity of wares which can well dispense with such a device."

DISPENSING PRESCRIPTIONS IN SHEFFIELD.

THE following is the quarterly report of the borough analyst of Sheffield (Mr. A. H. Allen) recently presented to the Town Council.

"Since the date of my last quarterly report, as your analyst of food, drink, and drugs, I have received and duly examined a total number of thirty-six samples. Considerable anxiety existing in the minds of some of the inhabitants as to the care and accuracy of the druggists of the town in making up physicians' prescriptions, it has been thought desirable to ascertain the state of the question by analysis. For this purpose the inspectors have presented to the druggists various prescriptions written by qualified medical men, and so arranged that each prescription should include a full dose of some rather expensive remedy capable of ready and accurate estimation in a mixture. The drugs chosen for this purpose were iodide of potassium, sulphate of quinine, and spirit of nitrous ether. The first batch of eight samples, containing but moderate doses of iodide of potassium, proved to have been correctly dispensed, at least as far as the principal ingredient was concerned. Another series of three samples, in which 120 grains of iodide of potassium were prescribed, were found on analysis to contain 122, 120, and 76 grains respectively. The last sample, therefore, was made up with hardly two-thirds of the quantity of active ingredient ordered—a grave departure from the prescribed amount. Of three samples which, according to the prescription, should have contained 16 grains of sulphate of quinine, two were found to be correctly made up, while the other contained only 9½ grains, or less than two-thirds of the prescribed amount. Of another batch of three samples, each of which should have contained 40 grains of sulphate of quinine, two were pretty accurately made up, while the third contained but 30 grains of the active ingredient, or three-fourths of the prescribed quantity. At the same time that the medicines were delivered to the inspectors, samples of glycerine were purchased, the best quality being asked for in each case. Of twelve samples examined only five were pure and of the standard strength of the British Pharmacopœia. Two other samples were somewhat below the official strength, containing 6 and 8·5 per cent. of water respectively, but were otherwise pure. Two others were adulterated with 11 and 12 per cent. of water, no other impurity being detected. Two were of full strength, but contained lime and some non-volatile organic impurity of indefinite nature. One sample was of full strength, but contained a small quantity of cane sugar. Three samples of citric acid have been received and found to contain a minute trace of lead. In other respects they were perfectly pure. Three prescriptions have been examined, containing a proportion of spirit of nitrous ether. The other ingredients of the mixture have prevented me from successfully ascertaining whether the prescription was correctly dispensed. Of eleven samples of pepper, received towards the termination of last quarter, and not fully examined at the date of my last report, nine were genuine, one was adulterated to a moderate extent with pea flour, and the other to a moderate extent with rice. A sample of flour, received from a private purchaser, proved to be unadulterated."

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The *Times* of January 10 gives the following report:—

Making up Prescriptions.—Very startling revelations are contained in a report just issued by Mr. Allen, the borough analyst at Sheffield, to the Town Council. It states that as considerable anxiety existed as to the care and accuracy of druggists in making up physicians' prescriptions, the inspectors of the Health Department presented to certain local druggists various prescriptions written by qualified men. The prescriptions were so arranged that each should include a full dose of some expensive remedy capable of ready and accurate estimation in a mixture. A series of these samples in which 120 grains of iodide of potassium were prescribed were found on analysis to contain 122, 120, and 76 grains respectively. The last was, therefore, made up with hardly two-thirds of the active ingredient ordered—a grave departure from the prescribed amount. Of three samples which should have contained 16 grains of sulphate of quinine, one contained only 9½ grains, or less than two-thirds of the prescribed amount. Another sample which should have contained 40 grains of sulphate of quinine had but thirty grains. Of 12 samples of glycerine, only five were pure and of the standard. Two other samples were somewhat below the official strength, containing 6 and 8·5 per cent. of water respectively, but were otherwise pure. Two others were adulterated with 11 and 12 per cent. of water. Two were of full strength, but contained lime and some non-volatile organic impurity. Another sample contained a small quantity of sugar. Three samples of citric acid were found to contain a trace of lead; but in other respects they were perfectly pure. With reference to 11 samples of pepper, Mr. Allen states that nine were genuine, and two were adulterated in some degree with pea-flour and rice. The health committee have decided not to prosecute on this investigation, but all the local druggists have been warned of their liability to prosecution.

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The *Globe* of January 10, after repeating the report, remarks:—These are facts of a somewhat disquieting nature, and we regret to observe that the health committee decided not to prosecute, but simply to warn local druggists of their liability to prosecution. Surely no time should have been lost in making examples of men so utterly selfish and reckless. It is to be hoped that the next cases of a similar kind which come to light may not be treated with this ill-timed leniency.

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The *Pall Mall Gazette* of the 11th says:—Some very disagreeable revelations as to the manner in which physicians' prescriptions are made up are contained in a report by Mr. Allen, the borough analyst at Sheffield, giving the result of an experiment lately tried with the view of testing the accuracy and honesty of druggists. Various prescriptions, each including a full dose of some costly remedy capable of ready and accurate estimation in a mixture, were presented to certain druggists. A series of three samples in which 120 grains of iodide of potassium were prescribed were found on analysis to contain 122, 120, and 76 grains respectively. Of three samples which should have contained 16 grains of sulphate of quinine, one contained only 9½ grains. Another sample, which should have contained 40 grains of sulphate of quinine, had but 30 grains. Of twelve samples of glycerine only five were pure and of the standard strength. Three samples of citric acid were found to contain a minute trace of lead. In short, the result of the experiment was such as to give just ground for apprehension that druggists are not more troubled with consciences than grocers, and that the effect of the poisons retailed by the latter is often enhanced, instead of removed, by the adulterated antidotes dispensed by the former. The health committee at Sheffield have, it is stated, decided not to take any proceedings against the druggists whose medicines were found wanting. This is satisfactory to the offenders, but less so to the public. In the meantime, it is only fair on medical men, who are often accused of killing their patients, to admit that this accusation is hardly just if their prescriptions are liable to revision by chemists and druggists.

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The *Telegraph* of the 12th considers that the result of Mr. Allen's report cannot, even on the most charitable assumption, be considered as other than very disgraceful to the pharmacists in whose establishments these precious mixtures were, to use the technical phrase, dispensed. For the sick, quinine and iodide of potassium are as often as not positive necessaries, and the chemist who, being ordered to put 40 grains of quinine into a prescription, takes his scales, and, like the unjust steward in the parable, inserts only 20, cannot but know that for the sake of saving a few wretched farthings—for farthings only are involved in such a difference—he is risking, and deliberately risking, the life of a patient.

This being so, it is shocking and distressing to see that the health committee of Sheffield has decided not to take any proceedings against the chemists and druggists who have been found thus neglecting the very grave responsibility which the law imposes upon them.

In the old times every medical man was his own chemist and druggist, and made up his own prescriptions. It is not many years since this practice began to fall into desuetude, and in the country districts it still—for very obvious and satisfactory reasons—lingers on. In cities and towns, however, the business of the so-called "general practitioner" has now for some years past separated itself into its two distinct branches, and the medical man writes the prescription, while the apothecary makes it up. As a natural consequence, the mere apothecary, or vendor and dispenser of drugs, has tended, by the inevitable force of circumstances, to become less and less of a professional man and more and more of a mere shopkeeper, whose income depends upon the annual total of his sales. This being so, it is not, perhaps, astonishing that in certain cases Mr. Allen's analyses should have, unfortunately, yielded the results to which he testifies.

A licensed victualler who mixes his bitter beer with water is not exactly an honest man, but can hardly be considered a public enemy. If, however, he fortifies his barrels with strychnine, cocculus indicus, or any other such noxious and deleterious drug, we have a distinct right to judge of his conduct by an entirely different standard. And, similarly, a chemist who dilutes his cod-liver oil, or who deliberately uses only 20 grains of quinine where he ought to use 40, and, as a matter of fact, does not forget to charge for 40, commits an offence for which, from the point of view of its moral turpitude, no fine, however heavy, is an adequate measure of punishment. For a sick child, slowly recovering from a fever, the difference between 3 grains of quinine a day and 6 may be the difference between life and death. It is a horrible and dreadful thing to think of the mother sitting up all night by the cot of her little one, and giving it with her own tender hand its nourishment and medicine, trusting—poor thing!—that the potent remedies will do their work, while the whole time the potion is valueless, and the chemist, to make a wretched profit of some twopence or threepence on an ounce bottle, has, with cold-blooded deliberation, sacrificed the little innocent, happy life to his own miserable greed. That such cases are rare we are happy to believe; but that they never occur Mr. Allen's report, unfortunately, forbids us to doubt. This being so, a double question arises. The Apothecaries' Company—a body which in every way deserves well of the public—has to consider how far it can meet the abuses complained of. The public themselves, on the other hand, have to consider by what practical means they can best ensure their own safety. To this latter question it is possible, fortunately, to give a very satisfactory answer. The fact that the drugs which are used in the preparation of a prescription are from Apothecaries' Hall is the very highest testimony to their purity and virtue. The Londoner can go, if he so pleases, direct to Apothecaries' Hall itself, or to one of those many large establishments the old reputation of which is in itself a guarantee. In the country the patient sure to be safe in the hands of his medical man; for those practitioners who make up their own prescriptions are in the habit almost universally of procuring their drugs direct from the great Blackfriars emporium. Where, however, the adviser contents himself with writing out the prescription, the patient or the patient's friends should always ask him to recommend a druggist. The patronage thus exercised is sure to be wisely used, and with a due sense of the important trust which it involves. It could be wished, indeed, that medical men as a rule felt less delicacy in recommending to their patients a druggist upon whose honesty they placed a proper reliance. A physician ought to select his druggists in exactly the same manner and for exactly the same reasons as a solicitor selects his life insurance office. Open competition is all very well in certain rough-and-ready matters. But in those cases where trust and confidence are vitally necessary—and there are many more such than is commonly supposed—competition pure, simple, and unaided, can hardly be said to afford the general public that protection which they have a right to expect.

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The *Standard* of the 13th does not suppose that dishonest chemists form the majority of their trade, but the revelations at Sheffield show a widely-spread dishonesty in a calling where scrupulous honesty is of the highest importance to the public which has recourse to its assistance. To describe the deeds of fraudulent chemists as mere dishonesty falls very short of the mark. The term inhumanity is, indeed, hardly strong enough. It is almost impossible to exaggerate the heinousness of the offence, the committal of which may involve a question of actual life or death.

The community will, of course, ask what is the remedy against this dangerous state of things, and how it is to be protected from dishonesty such as practised by the Sheffield chemists. From the fact that the Sheffield health committee have decided not to take legal proceedings against the offenders it would seem that in their opinion the Food and Drugs Act of last session is not applicable to these cases, nor, indeed, any other existing legislative enactment. We can hardly conceive this to be the case, but if it be so the necessity of further legislation to meet this particular form of fraud is imperative; and we would urge the Apothecaries' Company and the Pharmaceutical Society at once to take the matter into consideration. We are completely at the mercy of chemists and druggists, and if their integrity cannot be depended on no one need regret that they should go to the wall. There is, moreover, no real excuse for dishonesty on the part of chemists and druggists. They realise a very high profit on the goods they sell. We hope, for the sake of all concerned, that dishonesty in the drug trade is not so extensive as many persons, in consequence of the Sheffield exposures, will be inclined to believe, but at the same time we sincerely trust that the question now raised will not be lost sight of till the public is supplied with further and efficient safeguards.

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At a meeting of the Sheffield Town Council on Jan. 12, a very spirited discussion took place on Mr. Allen's report. Mr. Brittain, one of the councillors, urged the health committee to prosecute these chemists, whereupon Mr. J. T. Dobb got up very indignantly, and, in a long speech, charged the borough analyst with issuing an unfair report, which had cast a gross reflection on a band of honest tradesmen. He pointed out that the test had only been applied to chemists away from the centre of the town, who were not in the habit of dispensing medicines, and then, giving his own opinion as a chemist, and the opinion of Dr. Griffiths, the borough medical officer of health, pointed out the difficulty of analysing, and the almost impossibility of ascertain ing the quantity of iodide of potassium when mixed with other ingredients. He demanded that the report should be issued in a better form, inasmuch as in its present state it branded the entire fraternity of dispensing chemists. The report will be reconsidered.

MEETING OF THE SHEFFIELD CHEMISTS.

THE annual meeting of the Sheffield Pharmaceutical and Chemical Association was held on Wednesday evening last, the 12th inst., and drew a large attendance, in consequence of the excitement occasioned by the recent report of the borough analyst.

Mr. Maleham presided, and, at the opening of the meeting, Mr. J. H. D. Jenkinson, the Secretary, read the report of the society, which showed that twelve new members had been added to the association, as well as three associates. Increased subscriptions had placed the society on a firmer basis. Several convictions under the Pharmacy Act had been obtained during the year, and several cases of infringement contrary to the provisions of the Act were now under consideration, and would be proceeded with. Some notorious cases had occurred of infant poisoning by cordial, and the borough coroner had offered to co-operate with the association to put a stop to the sale of poisons by unlicensed persons. The balance-sheet, after all expenses had been paid, showed a gain on the year's working of 6*l.* 19*s.* 11*d.*

Mr. Jervis was elected President of the association for the ensuing year, and took the chair forthwith. Messrs. Ellinor and Hudson were appointed Vice-Presidents, and Mr. Radley Treasurer. The Secretary having been re-appointed, the meeting was made special, to take into consideration the recent report prepared by the Borough Analyst to the Health Committee.

The Chairman, in introducing the subject, said he trusted that recent events would show to the chemists generally how necessary it was that they should join an association to prevent a most honourable and respectable calling from being abused and dishonoured in the manner they had lately seen. The vague report prepared by Mr. Allen as to the compounding of prescriptions by Sheffield chemists caused a feeling of discomfort which only time and energetic measures could dispel. The mistake had been, not in making specific charges, and thereby giving persons an opportunity of defending themselves, and of allowing the public to form an unbiased opinion, but in making a sweeping, general charge against the trade. (Hear, hear.) It rested with the association to take what steps it thought fit, and he trusted they would give the matter their serious attention in order to prevent in future such a serious and undeserved scandal upon the respectable chemists of the town. (Hear, hear.)

Mr. Radley, who said he would never stand up in defence of a wrong, did think it hard that the respectable members of the trade should be involved in such a very serious charge, a charge which was not confined to Sheffield, for it had flown on the wings of the press to every part of the country, and in fact to every part of the civilised world. The misfortune was that the defence was not at all likely to travel so far as mischief, and he regretted very much that there was so much indefiniteness in the report prepared by Mr. Allen. He thought that the report ought not to have been made at all, or that it should have been a definite report. If it were merely intended by the authorities as a warning to certain persons in the trade, that result would have been obtained by communication in a more direct and more private manner. To attack and to throw odium on the whole trade, and to, as it was stated in one paragraph in the report, do that for the purpose of testing the dispensing of medicines from prescriptions by the chemists in Sheffield, was not at all a fair thing, because the principal chemists in the town had been overlooked entirely. He felt sure that had the parties in the habit of dispensing physicians' prescriptions been tested, the result would have been quite different. He had the greatest confidence that the dispensing of medicines was well done in the town, and that the purity of the medicines was equal to that to be obtained anywhere else. He sincerely regretted that the affair had assumed its present shape. He felt that it was a difficult matter to deal with it specifically; they could only look at it in a general way. He had no doubt that they would be much abused, and it would be years before they gained throughout the country the character which they previously possessed. In these days of chemical associations the doings of large towns and their associations were pretty well canvassed, and he feared that they would be held up to the odium of other chemical associations in the country, although that odium would be thoroughly undeserved. So far as his information went, persons had been applied to who seldom or ever had physicians' prescriptions in their shops; in fact, they were persons for the most part who would rather not see such prescriptions brought into their shops. He had been told that one of the tradesmen applied to actually sent the prescription to another shop; therefore, he contended, that was not a fair sample of the trade, and he felt ashamed that the respectable chemists of the town should be subjected in such an unfair manner to that unfavourable report. He did not for one moment blame Mr. Allen for discharging his duty as a public analyst, and cast no reflection on his ability, but merely on the mode in which he had drawn up the report. (Hear, hear.)

Mr. Ward said the chemists and druggists did not desire any favour from the borough analyst; but it was their duty to see that fairness and justice were done to them as a body. He contended that the mode adopted by Mr. Allen in the preparation of his report was not satisfactory to them as members of an association which had endeavoured to enhance the position of the chemist and druggist. If, in sending in the prescriptions, Mr. Allen had sent them to men who were accustomed to compound physicians' prescriptions, he would have adopted a straightforward course; but instead of that he had gone to those who were wholly unfitted to dispense such prescriptions. It was a positive fact that at least two-thirds of those who dispensed the prescriptions referred to by Mr. Allen were wholly unfitted for the work. They were for the most part tradesmen who did not see a prescription once a month—men to whom a prescription was really a *rara avis*; and, therefore, how could it be expected that men like that could correctly compound prescriptions, with chemicals constantly undergoing changes, and with drugs deteriorating by keeping? How could they expect to stand by analyses by the borough analyst under circumstances such as these? He argued that Mr. Allen had not at all gone in a straightforward way in his mode of testing; and that whilst it was his (Mr. Ward's) wish and the wish of every member of the association to carry out to the full the provisions of the Adulteration Act, he must enter his protest against any advantage being taken against them. He intended asking Mr. Allen to think carefully over the matter, and to take steps other than those of which he had been "guilty" during the past few weeks. It happened to be his lot to be visited by the two formidable gentlemen known as inspectors; and he need not say he should have no hesitation to subject a portion of the preparation given to them from his establishment to further analysis. (Hear, hear.) He did not hesitate to say that it was prepared as carefully and as correctly as any pharmacist could prepare it. Fortunately, the prescription brought to his shop came under his own superintendence; and he was glad it did so, because he was able to say the medicine was prepared exactly in accordance with the prescription. He hoped in future the borough analyst would bear in mind what had been said, and not in any way indulge in taking advantge of them as a class. If he wanted prescriptions carefully prepared, it was not fair he should go to those who were not in the habit of carefully preparing them or of compounding prescriptions at all. He hoped the members of the association would let Mr. Allen know that they were prepared to carry out the Adulteration Act to the very letter, so far as lay in their power.

Mr. J. T. Dobb then addressed the meeting, informing the members of the association that he had already brought the subject before the Town Council. His speech to the association was very similar to his observations before the Council, reported elsewhere. He pointed out that he objected to the report because it did not convey what the borough analyst intended it should convey. The question raised was whether the chemists and druggists of Sheffield dispensed prescriptions accurately, fairly, and honestly; and in alluding to this matter in the Council he had spoken not as a chemist, but as a public servant anxious to do a public duty, without casting any reflection upon Mr. Allen, who, he believed, was capable of fulfilling his duties as borough analyst. It seemed to him, however, that a chemist who would sacrifice the health of another in order to save a few grains of a certain ingredient would be a vile scoundrel, and he could not think for a moment that any man would wrongly dispense a prescription for monetary gain. So it would not be easy to charge the chemists, where there was an alleged deficiency of ingredients and a difficulty of analysis, with doing such a thing to get a little more money into the [till. The report had unfortunately gone all over the world, traducing the character of the chemists and druggists of Sheffield, when there had been no intention to do so on the part of the borough analyst, and the fact showed how important it was that public officials should be very careful in any reports they might make. (Hear, hear.)

Mr. Preston then addressed the meeting, observing that the report spoke not of the particular druggists to whom the prescriptions had been sent, but to "the druggists of the town," and against this phrase he desired to enter his protest. They found that eight samples had been sent out in which there was iodide of potassium, and the whole of these were compounded correctly; therefore it might be said that 100 per cent. had been made up correctly. He then went into very minute details, alluding to the number of grains of iodide of potassium found in some of the mixtures, and argued that the analysis might or might not be true. In concluding, he regretted that the chemists to whom these prescriptions had been supplied had not been prosecuted and the matter pressed to a trial, because it was desirable that in cases like this they should be brought before a public tribunal, and condemned or acquitted as they deserved. (A voice: "It may be so yet.") Then, he said, the sooner the better, because the town, as well as the trade, was concerned in the matter. (Hear, hear.)

Mr. E. R. Learoyd and several other members of the association also addressed the meeting on Mr. Allen's report, and expressed a very strong opinion as to the way in which the report had been drawn up.

Mr. Radley moved—"That whilst strongly disapproving of any dishonest act in trade, this meeting desires to express its regret that the borough analyst, in the wording of his report on the dispensing of prescriptions in this town, has cast unmerited reproach on the entire trade, inasmuch as the test was applied to a small number residing in the outskirts, and not frequently called upon to compound prescriptions for medical men, whilst those residing in the principal parts of the town, and accustomed to such duties, were all but ignored." (Hear, hear.)

Mr. Ward seconded the motion, which was carried unanimously.

The following gentlemen were then declared elected as the council for the ensuing year:—Messrs. Ward, Cubley, Malecham, Learoyd, Preston, Turner, Hewitt and Carr.

The proposal of three gentlemen for membership brought a very successful meeting to a close.

LABORATORY NOTES ON OILS.

[Paper read before the Liverpool Chemists' Association by Mr. J. T. Armstrong, F.C.S.]

Analytical chemists have no more difficult task than the examination of most of the fatty oils, and with very few exceptions the report they return to the merchant who sends them the oils for examination is far from being so satisfactory as could be wished. The difficulties are chiefly these: First, that the specific gravity is but of little avail, especially when oils are adulterated with other oils of similar nature; and, secondly, the lack of standard samples for chemists to base their results upon. When we remember that there are about sixty kinds of oils having an animal or a vegetable origin, we need not be surprised that analytical chemists should have such a limited knowledge of their individual composition.

Further, to be thoroughly *au fait* in oil analysis, our analytical chemists would require to be constantly on 'Change, to see how the markets were going, because these regulate the class of oil used for adulteration; for it would never pay him to examine an oil for the ordinary fee so thoroughly as to tell the precise adulterant, unless he had some previous indication of what would probably be used. The necessity for more information on the identity of oils is shown by the errors made by Dr. Morgan a few weeks since, when he stated in court, first, that train oil was a vegetable product, and then, on being again asked, said it was a mineral oil.

First, let us examine some of the tests for oils in general use, and which I may call imperfect tests for the reason that if they detect an adulterant the oil must not have been adulterated skilfully.

Colour Tests.—Among these are what I call colour tests, such as adding to the oils to be tested sulphuric acid or different alkalies and noting the change of colour and the different shades produced. I have always found these insufficient as regards most of the seed oils, and but barely useful in respect of most of the fatty oils, except where the colour has been of a very marked character, and not, as is the case with most samples, only just a shade different from colour produced if the oil be genuine. There are, however, a few exceptions when such tests are very useful. As an example, if I take 20 parts of olive oil and agitate the same with 2 parts of ammonia, a thick liniment is the result; but if I take 20 parts of poppy-seed oil and add 2 parts of ammonia I get a crumbly mass.

Oilometers.—The next tests we have to examine are the oilometers in use. These, unless very accurately made and used in conjunction with a thermometer, are but of little use, and at any time only as a rough test, for some of the oils run so near each other (take, for instance, olive, rape and seal), that it is impossible to detect the admixture of one with the other. Of course the difference between Sperm and Gallipoli is easily shown, and if sperm oil be adulterated with another fish oil to 12 per cent. it is readily observed by the oilometer. But the makers of these instruments are not particular enough to adjust them to the exact temperature, nor do they make them fine enough, because too short in the stem. It is, I am sure, unnecessary for me to describe the manner in which the oilometer is used after what I have said, but the following table will show you the range of the instruments. I give the record of a few out of many experiments made with them:—

Seal oil	16
"	28½
Pale seal	22
Dark seal	23½
Menhadden oil	20½
" "	21½
East Indian fish oil	18½
Double refined cotton-seed oil	24¼
Cotton oil	23
American cotton oil	24
" "	24½
Linseed oil	21
Syracuse	26
Lard oil	26
Mineral oil	16
Sperm oil	43
" "	40
Rape oil	27½

Hydrometers.—There is a hydrometer made with a range of 850° to 950°, which for light fluid oils, such as ordinary mineral lubricating oils, I have found very useful, and having a length of tube of about 12 centimetres, it will be found to be, for ordinary purposes, fairly accurate, but being adjusted at 60° the oil to be tested must be at that temperature. Of course, if the gravity of the oil is regulated by mixing it with resin or indiarubber this test will be of no avail, and others must be made.

Viscosity of Oils.—The viscosity of oils is another comparative test, which consists in noting the time an oil takes to run through a tube kept for the purpose, and the time, either longer or shorter as the case may be, that one oil takes than another. This gives the result wished for, the temperature being kept in all cases the same. For example, if a certain quantity of water runs through the tube in twelve seconds, olive oil will take 197 seconds. This, with the testing of the oil for acid and the length of time it takes to run a certain distance on an uninclined sheet of iron before becoming "gummy" is, perhaps, one of the best for generally testing an oil in respect to its lubricating power.

Specific Gravity.—Perhaps one of the best tests, if you first get a pure oil to start with (as a standard), is that of specific gravity. The co-efficient of expansion of the oil should also be taken into consideration, but the care and manipulation required is very great if accurate results are to be attained. I use a 50 gramme bottle, and find first what weight of distilled water it contains at 15° C. I next determine the weight of the same quantity of the oil and its temperature. Lastly, the weight of the oil is divided by the weight of the water. This gives the specific gravity. The co-efficient of expansion in this way has been found to be 0·00063 for every 1° C. Some time ago, in relation to this subject, a gentleman published in the *Chemical News* a list of 38 experiments made with different oils, and gave at the same time in a very able manner (for he was treating a difficult subject) the way his experiments were performed, but with respect to his results given about some of the oils, my experiments do not compare favourably. Whether he or I had the pure oil to work upon is to be proved. I just say this to show the difficulty of procuring pure oils for first experiments, for I have no doubt our experiments were both accurately performed.

And now to examine a few of the oils individually.

Petroleum.—A good test for petroleum oil is to mix sulphuric acid with its own bulk of water and add the oil to be tested. The water and acid ought to become a little yellow, and, of course, the oil whiter, when mixed together. It should have a specific gravity of between 0·797 and 0·805, and be perfectly sweet in smell. I am sorry to say that the Americans are loading the burning oils they are sending into this country with as much naphtha as they possibly dare. This is a state of things that ought not to be allowed, and it is quite time the Government looked more fully into the indiscriminate sale of these highly dangerous burning oils, for I firmly believe from experiments made by myself that if the oils spoken of were thoroughly tested, and results of quantities put together, it would be found that more than two-thirds of the oil sold would give off inflammable vapours at under 105° Fahr. The subject of the testing of petroleum oils is one that would repay any chemist to give much time and attention to.

Boiled Linseed Oil.—I should have wished to have said much upon the subject of boiled linseed oil, for I have given it a little of my attention, but time has prevented me from doing so. I have found that the oil must be perfectly clean and bright before being boiled, and the heat raised to about 325°. The older the oil is in its raw state the better, and the chief cause why we have so many complaints on every hand about boiled linseed oil is because every maker thinks he has succeeded in finding something by adding which he can cause it to absorb oxygen from the air, thereby making it a good dryer; but my experience has been that there are very few of these materials, and the few are all expensive ones, that at all benefit the oil by being mixed with it. It would be a great deal more to the advantage of the oil if makers were to pay a little more attention to its manipulation, and not care so much about trying to make it dry as quickly as possible, but to make it last on the wood as long as possible.

Raw Linseed Oil.—Linseed oil has been sold for pharmaceutical use mixed very largely with cod oil, which, of course, for many purposes will be very deleterious. It is detected by mixing 40 grammes of the oil with 12 grammes of nitric acid and well agitating together. It is then put by till the acid and oil separate, and if the oil has a darker brown colour and the acid become yellow, it is a proof of adulteration with cod oil. One of the chief reasons that it is so difficult to get a pure sample of linseed oil is that where the crushers procure the seeds other seeds get mixed with the linseed. This I have often found to be the case, but this might be remedied by sifting, as the other seeds are of a different size.

Rape-seed Oil.—The English makes of rape oil I have found of late very much adulterated with hemp-seed oil. For many purposes it is always necessary to test the oil to see if all the acid that has been used in refining it is thoroughly washed out. Most of the cruciferous seeds contain a small portion of sulphur, and this acts as a good basis to go upon to distinguish this class of seed oil from others, such as nut oil and linseed oil.

Olive Oil.—Olive oil I have found adulterated with an admixture of rape and resin oil, cotton-seed oil, poppy-seed oil, linseed and rape oil. There is a great difference in the olive oil sent into this country, even from the same places, and I have always found that the oils that are sent home first, being those that are made from the first ripe fruit, are the best, and I am sure of this, that many improvements are to be made in its manufacture and in the gathering of the fruit that would greatly enhance its monetary value both to the grower and manufacturer.

Determination of Alcohol in Fusel Oil.—Perhaps it would be well to state for the benefit of any pharmacists present that the London Custom House authorities test the amount of alcohol in fusel oil in the following manner—by adding equal volume of water to the liquid to be tested, and agitating the same thoroughly. They then allow it to stand for about ten hours, and find it by that time separated into two layers, the fusel oil of course being the top one. The lower layer is taken, and its specific gravity found, the difference between that and the specific gravity of the original water indicating by calculation the proportion of spirit. I fancy, from my own experience, there must be a better test than this, for I fear the result may not always be the alcohol present, but some other body. In my note-book I find a remark to the effect that it would well repay anyone to examine the essential oils for water, which most of them contain, although they appear to be perfectly limpid; and I throw this out as a hint for some one present to take up the question, for all my own spare time will be employed with the fatty oils, as I am sure the question will well repay careful examination.

Resin Oil.—This oil is chiefly made by means of distillation in the ordinary manner from the American varieties of resin, and is chiefly used for the manufacture of ordinary carriage grease, and I am sorry to say, on account of its readiness to combine with other oils, is often employed as an adulterant. It is, however, easily detected when used a little freely by heating any mixture with which it may be combined the smell of the resin will be readily perceptible. There are some sorts of resin oil which, when specially purified, are very suitable for mixing with other oils for machinery with heavy bearings, and which moves with great rapidity, but the strong smell and its tendency to deposit resin when hot must be entirely removed before using it.

Train Oil.—Great quantities of resin oil are used for the adulteration of this oil, the strong smell of fish hiding that of the resin, and also because the oils strongly resemble each other in respect to their density.

Mineral Oil.—Perhaps the question of the adulteration of animal and vegetable oil with mineral is one of the most important, and one upon which much has been said and written, yet, I am sorry to say, to but little purpose. There is no doubt that for many kinds of machinery the admixture is very beneficial, and is carried on to a very great degree. I think such mixture would prove commercially beneficial to users of steam power in the hands of those who know their business, and who carry on the same in a straightforward and honest manner. But it would never do, as is thought by some, to leave the mixing of these oils to the consumers themselves, for the simple reason that the buying of the mineral oil necessitates the thorough testing of many samples before a good one can be got, and afterwards the oils should be mixed under the guidance of those who have been scientifically taught how to do it. Oil thus mixed is readily detected by its bluish tinge and by its smell. If not thus, it can in most cases be proved by seeing if the oil will saponify. Some people have been led away with the idea that the gravity of the oil will readily tell an admixture of mineral, but such is not the case, as oils are being made of same specific gravity as those with which they are to be mixed; and I know that a large Scotch firm had an order recently for some mixed mineral oil, to be of the same specific gravity as Malaga olive, and this was delivered to the firm giving the order in large quantities.

Mineral Oil and other Oils.—There has been much talk of late in the cotton spinning district about the number of fires that have occurred in cotton mills, and some who have not taken trouble to inquire thoroughly into the subject have put it down to the innovation of a mixture of mineral oils with other oils, such as olive, that has been long used to lubricate the spindles in those mills. This led me to make a number of experiments on the subject, and I found on taking an average of my results, and considering that I only used first-class mineral oils, although I used many sorts of seed and animal oils, that the addition of mineral oil, instead of increasing the liability to fire the mills, retarded the same, and also that the more mineral oil the mixture contained the less liability was there of the same firing.

PROPRIETARY MEDICINES.

FOR some months past the American pharmaceutical journals have been loudly proclaiming the anticipated virtues of a *Popular Health Almanac*, which, by exposure of their composition, is intended to upset the trade in proprietary medicines. It is edited by Dr. Hoffmann, of New York. The following results of analyses are given in it. Of course we do not guarantee the correctness of the formulæ.

MRS. WINSLOW'S SOOTHING SYRUP comes in vials containing 1¾ fluid ounce; it consists of sugar syrup strongly flavoured with an alcoholic tincture of fennel, anise, and a little caraway-seed, or an alcoholic solution of their essential oils, and with or without an admixture of solution of sulphate of morphine in varying quantity. While recently it has been found not always to contain morphine, at times as much as one-half of a grain and more has been found in each fluid ounce of the syrup, as often reported in the course of years in medical and pharmaceutical journals.

JOHN HILL'S PECTORAL BALSAM OF HONEY.—Each bottle holds 1¼ fluid ounce of a brown liquid consisting of a tincture of 9 parts by weight of balsam tolu, 2 parts of prepared balsam of storax, and 1 part of opium in 300 fluid parts of strong alcohol, sweetened with 80 parts of clarified honey.—*Hager*.

DALBY'S CARMINATIVE. — Each bottle contains 1½ fluid ounce of a whitish turbid liquid consisting of ¼ fluid ounce of strong alcohol, 1 drop oil of aniseed, 10 drops of tincture of assafœtida, a few drops of compound tincture of cardamom, and 10 drops of tincture of opium; which mixture, when prepared, is added to a solution of 10 grains bicarbonate of potash and ½ ounce of sugar in 1 fluid ounce of peppermint water, or instead of the latter in 1 fluid ounce of water intimately mixed with 1 or 2 grains of carbonate of magnesia and 1 drop of oil of peppermint.—*Hoffmann*.

GODFREY'S CORDIAL is a mixture of dilute alcohol sweetened with molasses, scented with oil of sassafras, and with an addition of a small amount of carbonate of potash, and about 15 drops of tincture of opium to each fluid ounce.—*United States Dispensatory.*

WALKER'S CALIFORNIA VEGETABLE VINEGAR BITTERS.—Each bottle contains 19 to 20 fluid ounces, consisting of a decoction of aloes and a small quantity of gum guaiacum, aniseed, and sassafras bark, in water slightly acidulated with acetic acid, or by subsequent fermentation, or by the use or addition of sour cider; to this are added about 1 ounce of sulphate of soda, ¼ ounce of gum arabic, and ½ to 1 fluid ounce of alcohol.—*Eberbach, Hoffmann, Nichols.*

BRANDRETH'S PILLS.—Each box contains 24 or 25 pills, each weighing about 2½ grains. The 24 pills consist of 10 grains of the root of May-apple, 10 grains of the extract of the same, 30 grains of the extract of poke-berries, 10 grains of powdered cloves, 2 to 5 grains of gamboge, traces of Spanish saffron, and a few drops of oil of peppermint.—*Hager*.

AYER'S CATHARTIC PILLS.—Each box contains 30 sugar-coated pills, each weighing nearly 4 grains, and consisting of aloes, compound extract of colocynth, gamboge, Spanish pepper, and oil of peppermint.—*Hager, Hoffmann.*

HOLLOWAY'S PILLS.—Each box contains 50 to 60 pills of unequal size and weight, weighing in all 1 drachm. They consist of 40 parts by weight of aloes, 20 parts of rhubarb, 20 parts of ginger, 5 parts of cinnamon, 2 parts of Spanish saffron, 5 parts of sulphate of soda, and 10 parts of sulphate of potassa.—*Hager*.

HOOPER'S FEMALE PILLS.—Each box contains 36 to 40 black pills, weighing 40 grains, and consisting of 4 parts by weight of aloes, 2 parts of crystallised sulphate of iron, 1 part of myrrh, 2 parts of extract of black hellebore, 1 part white Castile soap, and ½ part white canella.—*United States Dispensatory.*

RADWAY'S READY RELIEF.—2½ fluid ounces of a light brown liquid consisting of 2 ounces of soap liniment, 2 drachms of alcoholic tincture of Spanish pepper, and 2 drachms of strong aqua ammonia (hartshorn).—*Hager, Peckolt, Hoffmann.*

RADWAY'S RENOVATING RESOLVENT.—About 6 fluid ounces of a vinous tincture of cardamom and ginger, sweetened with sugar.—*Hager*.

PIERCE'S GOLDEN MEDICAL DISCOVERY.—7 fluid ounces of a dark brown liquid consisting of a solution of 1 drachm extract of lettuce, 1 ounce of honey, ½ drachm tincture of opium in 3 ounces of dilute alcohol, and 3 ounces of water.—*Hager*.

PIERCE'S FAVOURITE PRESCRIPTION.—10 fluid ounces of a greenish-brown turbid liquid consisting of a solution of ½ ounce of sugar, and 1 drachm of gum arabic in 8 ounces of a decoction made from 2 drachms of savine, 2 drachms of white agaric, 1¼ drachms of cinnamon, and 2 drachms of Cinchona bark; to this mixture are added ½ drachm of tincture of opium, and ½ drachm of tincture of fox-glove, and a solution of 8 drops of oil of aniseed in 1½ ounce of alcohol.—*Hager*.

SAGE'S CATARRH REMEDY.—Half an ounce of a green powder consisting of 200 grains of finely-powdered common salt mixed with 8 to 12 grains of powdered camphor, the same quantity of carbolic acid, and coloured with a mixture of 20 grains finely powdered yellow Puccoon root, with 2 grains of indigo.—*Bowen*.

HAMBURG TEA.—Each package, weighing about 2 ounces, consists of 1 ounce of senna leaves, ½ ounce of manna, ¼ ounce of bruised coriander fruit, and ⅛ ounce of powdered cream tartar, or tartaric acid.—*Hager*.

VAN BUSKIRK'S FRAGRANT SOZODONT.—Each vial contains nearly 2 fluid ounces of a red liquid consisting of a filtered solution of ½ drachm white Castile soap in 1 ounce of strong alcohol, ¾ ounce of water, and ¼ ounce of glycerine, coloured with cochineal and flavoured with the oils of peppermint, cloves, and wintergreen.

The powder which accompanies each bottle consists of a mixture of precipitated chalk, powdered orris-root, and carbonate of magnesia.—*Wittstein, Hoffmann.*

MORTALITY STATISTICS.

A COURSE of very interesting lectures has been commenced before the Society of Arts by Dr. B. W. Richardson, F.R.S., on "Unhealthy Trades." This active and eminent physician, by the inquiries he has made, is taking the most practical means possible towards the realisation of his ingenious idea of a city or country in which the mortality shall be reduced to the closest possible limits. The statistics brought forward in his first lecture are very striking and of great importance. He presented a table which has been quite lately compiled under the direction of Dr. Farr at the Registrar-General's office, which, based on the returns of the Census, gives the relative mortality, and thereby, inferentially, the vitality of the men of different ages in all the leading, numerous, and well-defined professions and callings in England and Wales.

A preliminary table shows how the population of England and Wales, according to the census of 1871, is divided. The gross total is 22.712,266. These are divided into six great classes, thus:—Professional (including army and navy), 684,102; domestic (including women engaged in household work, and all hotel and lodging-house keepers), 5,905,171; commercial (distinct from industrial), 815,424; agricultural, 1,657,138; industrial, 5,137,725; indefinite and non-productive (including persons of rank and property, and scholars and children), 8,512.706. It is a striking proof, says Dr. Richardson, of the active business life of our English beehive that out of the whole population there are no more than 168,895 self-acknowledged "ladies and gentlemen" of England.

To analyse the relative mortality of the various sub-divisions of the productive and industrial orders in this country, and to trace out as far as may be the causes of any exceptional danger, is Dr. Richardson's direct object. In this view the table to which we have before alluded is of special interest.

We omit in this place the figures which show the mortality at various ages, and reproduce only the table in so far as it shows the mortality as compared with the general average. The figures are deduced from statistics of the years 1861, 1862, and 1871.

Years of Life in 1861, 1862, and 1871	Deaths actually Recorded in the same Three Years	Deaths that would have occurred, according to the Standard Rate	Occupation	Deaths of Males aged 15 and upwards, engaged in different occupations, to 100 deaths of Males of all Occupations
9,722	135	215	Barrister	63
59,084	1,105	1,547	Clergyman	71
24.944	472	626	Protestant minister	75
228,248	3,160	4,173	Grocer	76
259,211	3,811	4,951	Grocers and shopkeepers	77
31,931	503	628	Gamekeeper	80
679,483	20,292	23,822	Farmer and grazier	85
11,829	154	180	Civil engineer	86
21,222	335	385	Bookseller, publisher	87
88,512	1,505	1,717	Wheelwright	88
105,441	1,890	2,114	Silk manufacturer	89
4.831,547	88,458	97,737	Labourer	91
551,399	9,255	10,175	Carpenter, joiner	91
4.013	110	120	Banker	92
394,066	5,028	5,386	Domestic servant	93
89,693	1,718	1,814	Sawyer	95
52,142	693	721	Brass mnfr. and brazier	96
22,681	388	406	Paper manufacturer	96
16.864	243	253	Musical instrument maker	96
31,875	454	469	Gunsmith	97
316,713	5,233	5,390	Blacksmith	97
594,435	11,576	11,827	Shoemaker	98
406,709	5,151	5,231	Iron and steel manufacturer	98
63,645	1,142	1,160	Tanner and currier	98
141,707	2,356	2,376	Baker	99
19,327,887	363,207	363,207	Males of all occupations used as a standard	100
257,003	3,406	3,395	Engine and machine maker	100
341,872	6,320	6,306	Wool and worsted mnfr.	100
422,859	5,532	5,475	Iron, copper, tin, and lead manufacturer	101
166,983	2,820	2,805	Baker and confectioner	101
87.608	1,470	1,447	Schoolmaster	102
35,086	840	825	Solicitor, attorney	102
90.234	1,679	1,627	Miller	103
4.052	82	80	Roman Catholic priest	103
59,517	1,067	1,025	Watchmaker	104
23,592	349	333	Tobacco manufacturer	105
43,514	1,135	1,067	Physician, surgeon	106
100.574	1,796	1,699	Shipbuilder	106
148,644	2,315	2,170	Messenger, porter	107
58,676	956	897	Coachmaker	107
27,406	571	532	Ropemaker	107
141,990	1,984	1,841	Draper	108
320.064	6,711	6,057	Tailor	109
1,041.473	19,305	17,709	Wool, ctn., flax, silk, mnfr.	109
50,181	782	711	Chemist and druggist	110
39,293	676	616	Commercial Traveller	110
204,040	2,799	2,523	Insurance, service and commercial clerk	111
196,882	3,781	3,412	Butcher	111
17,149	279	250	Carver and gilder	112
20,044	457	404	Farrier, veterinary surgeon	113
916,005	14,440	12,519	Miner (and others connected with mines)	115
583.079	10,187	8.884	Cotton and flax mnfr.	115
95.190	1,396	1,213	Printer	115
20,015	351	302	Bookbinder	116
41,062	665	557	Glass manufacturer	119
30,169	639	536	Fishmonger	119
245,269	4,256	3,536	Plumber, painter	120
187,324	2,755	2,275	Rlwy. engine driver, officer, servant, &c.	121
45,222	780	647	Tool, file, and saw maker	121
92.656	1,817	1,497	Harbour, dock labourer	121
33,989	920	747	Hatter	123
16,019	298	243	Coppersmith	123
6.189	124	101	Needle manufacturer	123
29,425	546	442	Mnfg. chemist, and dye and colour manufacturer	124
32,157	712	560	Hairdresser	127
87.640	2,098	1,628	Bargeman	129
200,663	4,181	3,200	Carman, carrier, drayman	131
111,464	2,234	1,702	Horsekeeper, groom	131
228,592	7,127	5,167	Inn & hotel keeper, licensed victualler, publican, &c.	138
69,811	1,320	959	Earthenware manufacturer	138
92,142	2,213	1,551	Coachman (not domestic), cabman	143

The reason for the difference of mortality as affected by occupation is in many instances obvious. We can understand, for example, why a gamekeeper or a farmer should have a better chance of life than a tailor, a miner, or a printer; or again why a barrister or clergyman should be in less peril than a physician or surgeon. But we are curious to have some explanation of the singularly high position in the list occupied by grocers, whose trade seems to be only next in heavenly favour to the reverend profession itself. Why should a proportion of 110 chemists and druggists die, while out of an equal number only 75 grocers succumb. The longer hours of the former may have some influence, but it will be remarked that drapers and commercial clerks, whose hours of toil are not so long as those of grocers as a rule, are on about the same platform as the pharmaceutists. The difference between Protestant clergymen and Roman Catholic priests may testify to the greater devotion of the latter or to the simpler life of the former. The low position of manufacturing chemists is a fact to be noted, and no one can help being struck with the result of the table as it concerns publicans. As Dr. Richardson says, although their occupation demands a considerable amount of physical activity, their calling, compared with that of the carpenter, for instance, or the engine and machine maker, or the shipbuilder, or the iron and steel manufacturer, or the blacksmith, or the miner, or the railway engine driver, must be accepted as comparatively light, and as exposing its follower to very few of the disadvantages arising from variations of heat and cold, nervous strain, and violent muscular exertion. On this point he quotes from Dr. Farr, who remarks:—"It seems to be well established that by drinking small doses of alcoholic liquors, not only spirits, the most fatal of all poisons, but wine and beer, at frequent intervals, without food, is invariably prejudicial. When this is carried on from morning till late hours in the night, few stomachs, few brains, can stand it. The habit of indulgence is a slow suicide. The many deaths of publicans appear to prove this. Other trades indulge in the publican's practice to some extent, and to that extent share the same fate. The dangerous trades are made doubly dangerous by excesses." The entire subject is one well worth investigating, and the commercial classes ought to be and will be grateful to Dr. Richardson for whatever aid he can give them by advice in ameliorating the special dangers of their occupations.

EXTEMPORANEOUS COATING OF PILLS.

By A. F. W. Neynaber, New York.*

WHY can pills as they are made in the retail prescription department not be coated there also with sugar, gelatine, or some such-like substance?

They can easily be coated with gelatine according to the directions given in the old edition of Griffith's "Formulary," or in Wood & Bache's "United States Dispensatory," 12th or 13th edition, with a little experience of the pharmaceutist.

Pills can also be coated in the retail prescription department with sugar. The success in coating pills rests chiefly with the first process in mixing the mass. The state of dryness of the pills has the most influence on the operation of coating with sugar as well as with gelatine, and pills can be thoroughly dried only if they have been prepared with the proper excipients. Here we come to the most important part in making pills, the excipients used. The success of the "manufacturer" of pills is mainly due to the employment of the proper excipients, enabling him to dry the pills thoroughly.

A pill may be soft, and yet not be as soluble as a hard pill. If we have gum resins, or resinous extracts, and add a little spirit, we will produce a pill of softness and plasticity, but when we take such a pill between our fingers and try to mix it with water, we will find that it may adhere to the skin, and cannot be well washed off without using alcohol or some other solvent of resin. On the other hand, if we take compound cathartic pills, prepared strictly as the United States Pharmacopœia directs, by using the different substances in the form of powders, and having beaten them into mass with water, we shall have a pill which will fall into powder again when put into water. The excipient should be such as will not combine much with the resinous or other ingredients, but form rather a layer between the powders employed. A layer of soluble substances between powders less soluble in water (such as gum resins or resinous extracts) will produce a pill that can be dried to become perfectly hard, and yet that will fall into powder when put into water, the water washing out the layer. Soft pills are apt to loose shape, and pills containing moisture cannot be kept in well-closed bottles, lest they become mouldy.

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* From the *American Druggists' Circular*.

The success in making pills is based on the excipient used.

Pills which have been thoroughly dried can be coated with sugar as follows.—Boil 32 ozs. of best white sugar with 12½ ozs. of distilled water to a syrup, and use enough of this syrup (temp. 120° to 150°) to moisten the pills in a small copper kettle or pan, exposing it to a heat sufficient to dry the pills while kept in motion and worked with the hand. After this first coat is dry, the operation is repeated until the pill is covered with sugar sufficiently. A very soluble coating for pills is the following composition:—1 oz. of flax-seed, ½ oz. of Irish moss, boil with 8 fluid ozs. of water, strain, add 4 ozs. of sugar, boil and use in the same manner as a solution of gelatine is used for coating pills.

If pills in very small quantities are to be made and coated with sugar or gelatine, in a retail prescription department, the mass should be made as hard as it possibly can be made, and allow cutting; after being cut it should be exposed to a draught of dry air so long as time will allow. Thus pills can be made and coated in small quantities within an hour or less time.

Provincial Reports.

IRELAND.

Pharmaceutical Society of Ireland.

The monthly meeting of the council of the above society was held in the College of Physicians, Kildare Street, on Wednesday, January 5, the President, Sir D. J. Corrigan, Bart., M.D., in the chair.

The following members were present:—

Mr. William Allen, Dr. Collins, Dr. Frazer, Mr. J. Goodwin, Mr. W. Hayes, Mr. E. M. Hodgson, Mr. J. T. Holmes, Dr. Leet, Dr. Macnamara, Mr. R. W. Pring (Belfast), Dr. Reynolds, Dr. Ryan, Dr. A. Smith, and Professor Tichborne.

The following business appeared on the summons:—

1. To consider a communication from the Privy Council.
2. To consider notices of motion for additional bye-laws, given by Dr. A. Smith.

The minutes of the previous meeting having been read and confirmed, the President read a communication from Mr. Taylor, Clerk to the Privy Council, in reference to the bye-laws, enclosing some suggested amendments and alterations from the law officers of the Crown. The majority of the suggested alterations were either of a verbal nature or in reference to the working of the society.

In reference to the election of examiners, the law officers remarked that they should not have been elected until after the approval of the bye-laws and their publication in the *Gazette*, and suggested the formal election of the gentlemen named after such publication.

In the bye-law relating to the voting papers for the election of members of council, the law officers suggested the addition of seven blank lines to follow the names of the retiring members.

The law officers called attention to the bye-law in reference to pharmaceutical chemists *only* being compounders of medicines, and remarked that it was clearly the intention of Parliament to make it optional with the council to allow certain persons to acquire the title of "chemist and druggist" if thought necessary at some future time, and suggested that some alteration should be made in the bye-law. The bye-law is to this effect: "There shall be but one class of persons entitled to compound physicians' prescriptions, namely, pharmaceutical chemists." After some discussion it was agreed to add the words "at present."

Dr. Frazer and Dr. Ryan, in conjunction with the President and Vice-President, were appointed to arrange the bye-laws as agreed to, and forward them to the Privy Council in their amended form.

Some additional bye-laws were proposed by Dr. Aquilla Smith. Most of them merely referred to formalities of election of members, &c., and were either negatived or passed. The most important, however, had reference to fees payable by apothecaries joining the society. Dr. Smith would make the cost to them six guineas, apparently with a view of preventing the swamping which might follow if the apothecaries joined *en masse*. The consideration of this was postponed until the next meeting.

The clerk to the council remarked that he had received about twenty letters which required answers, and asked was he to send replies. The President directed him to acknowledge the receipt, and say they would be considered at the next meeting. It being considerably past the usual hour for adjournment, the meeting was dissolved.

Chemists' and Druggists' Association of Ireland.

The holidays being over, the classes in connection with the above association have been resumed. The association has taken new and more commodious premises at 172 Great Brunswick Street. It is intended to fit up the necessary appliances for a course on Practical Chemistry; also, to form a nucleus for museum and library. Donations for the above will be very acceptable to the association, and may be forwarded to the Hon. Secretary, Mr. William Hayes, 12 Grafton Street, Dublin.

The inauguration of Dr. Owens (member of the Irish Pharmaceutical Council) as Lord Mayor of Dublin was carried out on January 1 with the usual pomp and ceremony.

The new Lord Mayor's equipages and general turn-out were very much admired.

The Lord Mayor did not honour the Pharmaceutical Council with his presence at its last meeting.

LIVERPOOL CHEMISTS' ASSOCIATION.

The fifth general meeting was held at the Royal Institution on Thursday evening, December 16, 1875, the President, Mr. A. H. Mason, F.C.S., in the chair

Mr. John Jones was elected a member.

The following donations to the library were announced—the "Year-Book of Pharmacy for 1875," from the Executive Committee; the Canadian *Pharmaceutical Journal*, from the editor—and thanks to the donors accorded.

Mr. Martin Murphy, F.C.S., stated that, wishing to confirm the experiments of Dr. Thudichum, he had operated upon a sheep's brain, but had not been able to get a trace of copper.

Mr. Edward Davies, F.C.S., called attention to the announcement that indol and indigotine had been found in serum and albumen: he thought it was a great chemical discovery, and would help chemists to account for the presence of indigo in urine, which hitherto they had not been able to do.

Mr. Murphy called attention to the address of the President of the Newcastle-upon-Tyne Chemical Society, which he thought cast serious reflections on the chemists and chemical trade of Liverpool—namely, the discrepancies which occur between the chemists of the two towns in testing samples of soda ash. He highly deprecated the idea of high testers and low testers, and thought it was for the association to move in the matter and endeavour to remove the evil.

Mr. Davies fully endorsed the remarks of Mr. Murphy, and said that for some years he was connected with one of the largest chemical works in the neighbourhood, and always used to report his testing of soda ash as, say, 46½ R. A. (real ash), 48 L. S. (Liverpool standard.) He did this to relieve his conscience. When he commenced business in Liverpool he always reported the real ash in the sample, and the result was that the sellers did not agree with his report, and now such analyses were not entrusted to him, but confined to a few chemists in the town who upheld the Liverpool standard.

Mr. Murphy said that the discrepancy referred to put 1,200*l*. to 1,500*l*. per week into the pockets of the manufacturers in this district, and that instances had been known in which it was to the exporter's advantage to bring the ash from Newcastle to Liverpool for shipment.

Mr. James T. Armstrong, F.C.S., read a paper entitled "Remarks from a Laboratory Note-Book on Oils," most of which we print in another article.

A discussion followed the reading of the paper, and a cordial vote of thanks to Mr. Armstrong brought the meeting to a close.

PHARMACEUTICAL FESTIVITIES.

THE MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

THE annual *soirée* of the Midland chemists, held in the Town Hall of their own metropolis, is unequalled for brilliance throughout the provinces. The last event of this kind was held on December 16, when some 300 ladies and gentlemen assembled. Most of the company were naturally residents of Birmingham, but London, Wolverhampton, Bristol, Leamington, and some of the other surrounding towns were represented. The exhibition commenced at eight o'clock, and commanded general interest. The spacious galleries of the Town Hall were set apart for this purpose, the ground floor being reserved exclusively for dancing.

The largest exhibition was made by Messrs. Southall Bros. & Barclay, who contributed articles of much interest. They showed, for example, the process of evaporating extracts *in vacuo*, by placing a glass retort in water of about 100° Fahr., and connecting the beak with a worm, which in its turn was connected with an air pump. By using the latter the solution in the retort was caused to boil instantly. Several glass jars containing colourless solutions were also placed in such a manner that other colourless solutions were allowed to drop in them, producing variously coloured precipitates. The red iodide of mercury was a very successful product of this chemical necromancy. Their pharmaceutical display was not less attractive. A curiosity was a musk pod which, it was stated, had defied the ingenuity of three experts, and had realised 45*s.* per ounce. Excellent musk had been placed in all the places where it was possible to insert a knife, but when completely opened the interior was found full of a skinny sort of rubbish.

Messrs. Southall have a well deserved reputation for the promptitude with which they bring forward pharmaceutical novelties from the remotest ends of the earth. Their latest was a specimen of *Bryonia Tajuja*, which, like all the recent ones, dates from Brazil. This is said to be a specific against syphilis, and M. Urbicini, who has sent some of it to Paris, records its extraordinary virtues in a negro tribe which had become infected with that disease. Messrs. Southall also showed a specimen of solution of emetine, which ought to become general in use. Ipecacuanha, as they showed in connection with a collection of drugs of standard quality, varies in its emetine from ·3 to ·8, and the wine is therefore liable to vary in the same proportion. Their solution of emetine is made of such strength as to correspond with the official ipecacuanha wine, supposing the latter to be equal to the standard. A reliable preparation is thereby obtained.

Messrs. Phillip Harris & Co., of Birmingham, made an attractive display of electric apparatus. A thermo-electric generator, the invention of a French *savant*, threatens to supersede all older forms of apparatus for electro-plating and gilding. No acids being required, and heat alone being used, it is cleanly, and gives off no noxious vapours, which render it particularly valuable for house purposes, such as electric bells. It is employed, they informed us, by Messrs. Elkington for the deposition of gold. In their chemical show they also exhibited some fine specimens of acetate of potash, crude and pure, which had been compressed in moulds after fusion.

Mr. R. Tomlinson decorated one end of the Town Hall with a display of stylish shop-fittings. In the corridors Messrs. S. S. Hand & Co. showed the processes of cigar making, from the stripping of the leaves to the sorting of the manufactured article, a number of their workpeople being present for the purpose. Mr. Tooth gave examples of glass-blowing; Mr. P. Squaglia gave illustrations of medallion and figure casting; and Messrs. White & Pike showed the art of colour lithographic printing, and the production of druggists' labels.

Messrs. Chance & Co., of Oldbury, sent a model of an apparatus for distilling sulphuric acid, the invention of an American, but the property of Messrs. Chance & Co., who sell the right to adopt it. By arranging and connecting a series of large glass retorts according to this system they claim to accomplish as much with 15 pounds of coal as 1 cwt. would effect by the usual method. Messrs. Chance also exhibited some very fine chemicals.

Several manufacturing jewellers of the town also gave illustrations of their craft, and a number of microscopes and spectroscopes, under the care of Mr. Wright Wilson, F.L.S., were offered for the entertainment of the visitors. Mr. Hume, of Gloucester, showed his useful series of the various starches mounted as microscopic objects; and a curiously clever geometric pen, worked by Mr. C. Pumphrey, delineated all sorts of fancy designs at the will of the operator with the intelligence of a "planchette" board.

The London exhibitors were this year limited to Messrs. Allen & Hanbury and Messrs. Davy, Yates & Routledge. The former firm sent a case of their "Hawker's" jujubes, and the latter some choice pharmaceutical specimens.

In the course of the evening, Major Gem read "Bob Sawyer's Party" from "Pickwick," and when the managers thought that their guests had revelled long enough in the world of science and literature, "music arose with its voluptuous swell," and from 10 P.M. to 2 or 3 A.M. the floor of the grand hall was the scene of such life and gaiety and brilliance as the chemists of but few towns could gather into one party.

SOUTH LONDON SCHOOL OF PHARMACY.

THE principals of the South London School of Pharmacy gave their annual Christmas dinner at the Horns, Kennington, on December 17. Dr. Muter occupied the chair, and Mr. Baxter, the Secretary, was vice-chairman. The company was as numerous as usual. The dinner having been heartily enjoyed, a long programme of toasts, speeches, songs, and character performances were got through, to the abundant entertainment of all present. Pieces were sung by the "choir" of the school with excellent effect, and several of the sentimental and comic singers thoroughly deserved the applause which we need hardly say was unstintingly given to all. Dr. Muter proposed the usual preliminary toasts, that of the Army, Navy, and Volunteers, being replied to by Captain Lestrange. The toast of the evening was also proposed by the chairman. It was "Success to the South London School of Pharmacy." After alluding to the death of Mr. Twist, which had occurred since the last assembly, Dr. Muter proceeded to speak of the examinations as at present conducted. He considered the new regulations were very successful, and he believed the examiners were a body of thoroughly competent men. He was satisfied, from the general experience of that school, that anyone presenting himself at that examination board would certainly find what every Englishman expected—fair play. He also approved very cordially of the newly adopted method of classifying successful competitors alphabetically, and not in order of merit. This plan had not preceded, but had followed, the new regulations adopted in the South London School of awarding prizes to students. He maintained that the several schools could best judge of the merits of students, and the distinctions awarded should not depend so highly on the comparative chances of the examinations. Dr. Muter then named the following students to whom the medals and certificates of the school were this year awarded, these being handed to the victors by Dr. J. B. Mitchell. Dr. Muter remarked that the medal for the best practical pharmaceutist and dispenser had been awarded by that eminent pharmaceutist, Mr. Joseph Ince, who had personally attended and observed the practice. The following is the list:—

Senior Chemistry.	
Medal	Mr. Hannah
Honorary Certificate	Mr. Binnstead
Junior Chemistry.	
Medal	Mr. Shepley
Honorary Certificate	Mr. Brooks
Materia Medica.	
Medal	Mr. Keer
Honorary Certificate	Mr. Hannah
Botany.	
Medal	Mr. Hunter
Honorary Certificate	Mr. Fryer
Pharmacy.	
Medal	Mr. Brooks
Honorary Certificate	Mr. Shepley

This ceremony concluded, Mr. Pashler gave a very amusing "topical song," with allusions to many of the heads of the school. The song was written by himself, and he claimed indulgence on the score of being only an amateur song writer; "as an amateur, however," he added, "I *am at your* service."

Mr. Baxter followed with the toast of "The Successful Candidates." These, he said, trained at the South London School, are now' scattered all over the world. He believed the number would reach nearer a thousand than six hundred, as Dr. Muter had estimated. During the session just gone they had passed five more than all the other schools in the country put together; and only the previous day a lady who had studied with them all through her curriculum had passed the Major Examination, and was now the first lady pharmaceutical chemist in Great Britain. The presence of this lady in the school had ensured a tone of mildness, but with regard to the practice of pharmacy by ladies, Mr. Baxter remarked that there would no doubt be enough special trade for a few of them: at the same time he thought, on the whole, the fewer there were the better. He coupled with the toast the names of Mr. Shepley and Mr. Barker. These gentlemen responded; the latter, who was an "old" student, now in business at Bristol, winning great applause by his spirited speech. He assured candidates that they would get fair and honest treatment at Bloomsbury Square, and he particularly exhorted them "not to be afraid of Carteighe." Mr. Carteighe, he said, was looked upon as a severe examiner, but his object was to get to the bottom of candidates, and if he found common sense in them he was by no means an unfair examiner. The same gentleman, later on, proposed the chairman's health, and the immense enthusiasm which this toast evoked indicated, he said, that it ought really to be regarded as the toast of the evening. Mr. Pashler proposed the health of Mr. Baxter, which was also very heartily drunk; and in terms very complimentary to THE CHEMIST AND DRUGGIST, Dr. Mitchell proposed "The Representative Press." Dr. Livingstone, an old college companion of Dr. Muter's, spoke a few words to the students.

Mr. Bailey toasted Mr. Dodd, Mr. Williams gave "The Chemist," and Mr. Mitchell answered for "The Visitors," which was given by the Chairman. Many other songs were given with great spirit, and most lustily encored, and on the whole a more merry, cordial party can scarcely be imagined than the Christmas gathering of Dr. Muter and his "dear boys," as he said he was inclined to call them.

BURNLEY CHEMISTS' AND DRUGGISTS' ASSOCIATION.

THE annual dinner in connection with the above association was held on Thursday evening, December 16, at Rawlinson's Hotel. The attendance of the members was not so large as expected, but quite up to the average of previous years.

The chair was taken by Mr. E. Crawshaw, M.P.S., President; Mr. R. Thomas occupied the vice chair.

The Chairman, after a short introduction, referred to the Irish Pharmacy Act, noting the very low standard of the examinations required for the title of "Irish Pharmaceutical Chemist," inferior, he said, to the examination for "Chemist and Druggist" in this country. Attention was also drawn to the fact that the Council of the Irish society had decided to admit women to their examinations on the same conditions as men. Such being the case, the young chemists were enjoined to look to their laurels, or they might be defeated by the wise and intelligent of the fair sex. After some allusions to local and general pharmacy, the Chairman proposed the first toast, "The Health of Her Majesty and all the Royal Family." The company responded in a very hearty manner, afterwards singing the National Anthem.

Songs by some of the members followed, which were well rendered and very appropriate to the occasion.

Mr. R. Hitchin then proposed "Prosperity to the Burnley Chemists' and Druggists' Association," coupled with the name of Mr. R. Thomas, the Vice-Chairman.

The "Health of the President" was afterwards proposed by Mr. Thos. Hirst and seconded by Mr. J. W. Wright.

Other toasts and songs occupied the attention of the company until a late hour.

CONVERSAZIONE AT LIVERPOOL.

The twelfth conversazione of the Liverpool Chemists' Association was held at the Royal Institution on Thursday evening, January 6, 1876. There was a numerous attendance, upwards of 300 being present. The museums of natural history, curiosities of nature, and art antiquities, collections of birds from all countries, shells, minerals, insects, geological specimens, and the museum of the association, containing specimens of most of the products used in medicine—animal, vegetable, and chemical—were open for promenade during the evening, and through the kindness of many eminent firms several objects of scientific interest and novelties were exhibited and explained. Several members of the Microscopical Society of Liverpool afforded opportunities for the examination of interesting specimens of natural history, botany, and chemistry, animal and vegetable circulation, diatoms, foraminifera, insect anatomy, objects by polarised light, textile fibres, pathological specimens. The microspectroscope exhibited the spectra of blood and chemically coloured glasses.

Several photographic novelties, including the latest illustrations of keramic art, works of art in bronze and electro-plate, chemical apparatus, graphoscopes, stereoscopes with views, specimens of toughened glass, Clamond's patent thermo-electric pile, Gray's new magnetic indicator, Geissler's tubes, &c., were exhibited.

A model was exhibited by Messrs. Chance Bros. & Co., of Birmingham, showing the plant used in the new method of rectifying sulphuric acid by a continuous process. This consists in connecting together four glass retorts, which are made so as to allow the acid to flow through them in a continuous stream. The crude acid is run direct from the concentrating pans into the first retort of the series, where it undergoes a certain degree of concentration; thence it flows to the retorts succeeding, undergoing in each a further degree of concentration, till it finally flows from the last retort of the series, fully rectified acid. The average work done by a set of four retorts is ten tons full strength acid per week; the average consumption of coal is 3½ cwts. per ton of rectified acid. Two men per turn (a retort man and pan man) perform the whole of the work required for 16 retorts, making 40 tons acid per week.

At eight o'clock the chair was taken in the Lecture Theatre by the President, Mr. Alfred H. Mason, F.C.S., who, in opening the more formal part of the proceedings, spoke of the efforts of the society on behalf of science. Essentially an educational body, they had accumulated an excellent library and museum for the use of chemical and pharmaceutical students, and he reminded the audience that some of the most brilliant chemists of the present century had commenced their career in a pharmaceutical establishment. There was, he had been told, an impression that the members of the association met together only to discuss subjects not palatable to the general public, viz., about pills, plasters, &c.: such was not correct. They did talk of medicine, but in doing so they were benefactors, at least to the invalid public, for they discussed the best method of putting the properties of a medicine in the best form for administration, so as to render the dose as small and palatable as possible. Reference to the programme for the present session showed that papers would be read of sanitary and great chemical interest, and he thought they might fairly claim to be at least among the pioneers of scientific study in the town.

The audience had next the pleasure of listening to a most interesting lecture by Professor Barrett, F.R.S.E., F.C.S., &c., "On Geysers and Glaciers," as exhibiting the physical properties of water, of which the following is a syllabus:—

The phenomena associated with the boiling of water experimentally illustrated; water freed from air—the water hammer; the spheroidal state of water; a miniature boiler explosion; effect of pressure on the boiling point of water: the geysers of Iceland; model of a geyser in action; extraordinary eruptive power of the Stroker explained and exhibited; the source of heat in the geysers; the life history of a geyser; the freezing of water, and the phenomena of crystallisation; how under the influence of radiant heat the exquisite structure of ice is revealed; production of the so-called "ice-flowers;" the formation and motion of glaciers; how ice can flow like a river; experiments illustrating the regelation of ice; comparison of the life history of a glacier with that of a man; permanence of form amidst incessant change; conclusion.

The lecture was profusely illustrated with most successful experiments—photographs projected by the oxyhydrogen light, diagrams, numerous views, &c.

After an interval of half an hour for refreshments and promenade, Dr. Richard projected on the screen a choice selection of photographs, comprising illustrations of sculpture and architecture, views of the principal cities of Europe, and microscopic specimens of insect life. The band of the First Lancashire Artillery Volunteers was in attendance, and performed at intervals during the evening.

The Chemists' Ball will be held at Willis's Rooms on Wednesday next, the 19th inst. The list of gentlemen from whom tickets may be obtained will be found on one of our advertisement pages.

Scientific Notes from Foreign Sources.

GLYCEROLE OF IODIDE OF POTASSIUM.*

THE many defects pertaining to iodide of potassium ointment are not removed, as is well known, by the substitution of the mixture known as *Glycerinum Amyle* or *Unguentum Glycerini* for lard as excipient. The *Unguentum Glycerini cum Sapone* of the Hungarian Pharmacopœia is more suitable, and Thirault speaks of it having already been used for this purpose for some years. Barberes recommends the following as the best formula for such a *Glycerolatum kalii iodati*:—Potassii iodidi, 10·0; saponis animalis, 10·0; glycerini puri, 100·0. The potassium iodide is reduced to powder in a spacious porcelain mortar, and dissolved in a sufficient quantity of the glycerine. The soap is dissolved in the remaining glycerine, and the solution is poured warm and all at one time into the mortar, the contents of which are then stirred quickly and uninterruptedly till cool. The resulting glycerole is a pure white homogeneous mass, which becomes fluid with the warmth of the hand. It may be kept in closed vessels of porcelain or of black glass. The preparation is not subject to chemical change, the use of it is not followed by the least irritation of the skin, nor does it injure the linen.

CERATUM CHLORALI.†

PAVESI recommends as a substitute for emp. diachylon co., and as particularly appropriate for an antiseptic dressing, the following cerate:—Emp. diachyl. co., 100·0; glycerine pur., 10·0; chloral hydrate, 15·0 parts. The plaster is melted in a porcelain dish by a gentle heat, removed from the fire, and the glycerine and chloral hydrate mixed intimately with it. The cerate may be shaped into tablets or rolls. Spread upon linen it is of a yellowish white colour, has a faint odour of chloral, and is strongly adhesive. Pavesi recommends the introduction of this cerate into hospitals, in which, in consequence of overfilling, pyæmia and similar affections are common. The plaster develops ozone, by which the microscopic fungi which are to be considered the cause of the maladies named are destroyed. How far this at present depends on experience or on theory is not evident. Pavesi is also of opinion that by reason of its anæsthetic properties the cerate merits trial in rheumatism.

LUPULIN.

THE lupulin of trade is rarely free from sand. To separate this, Sarrazin ‡ tried sifting with only partial success. He then had recourse to washing, and agitated the lupulin with ten times its weight of water. On decanting quickly the sand was left behind. About 35 per cent. of lupulin was collected in this way, but as the washing water gave 2 to 3 per cent. of extract on evaporation, he concluded that an alcoholic extract would be preferable, for medicinal purposes, to lupulin purified in this manner. He therefore recommends that the lupulin should first be exhausted with alcohol, and afterwards with water. The two fluids are separately concentrated, then mixed, and the evaporation continued to the consistency of an extract, at 45° to 50° C. Lupulin yields 20 per cent. of extract.

ESTIMATION OF CUPROUS IODIDE.

ULEX § proposes to estimate the iodine in cuprous iodide, now imported largely from Chili, by the following process. Half a gramme of the material, carefully freed from alkaloids by washing, is suspended in water and eight grains of powdered zinc are added. On the completion of the reaction, which does not take long, the solution of zinc iodide is filtered from the precipitated copper, and two or three drops of potassium bichromate solution are added. The iodine in this solution is determined volumetrically by nitrate of silver. This process is, according to the author, more exact than the one generally employed, which consists in separating the iodine by distillation with ferric chloride.

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* *Pharmaceutische Zeitung*, October 9, 1875, p. 671.
† *Ibid.*, *p.* 671.
‡ *Journ. de Pharm. et de Chimie*, December, 1875, p. 437
§ *Ibid.*, p. 460, from *Archiv. für Pharm.*

RHATANINE.*

IF a solution of extract of rhatany in a large quantity of water be precipitated with sub-acetate of lead, the lead compound decomposed by sulphuretted hydrogen in the usual way, and the sulphide of lead removed by filtration, a solution is obtained which on evaporation and cooling gives a crystalline magma of rhatanine. This is subjected to pressure, and the crystalline cake, after washing with cold water, is treated with ammonia and carbonate of ammonia. On filtering, a solution is obtained, which, when left to evaporate spontaneously, gives, after some days, interlacing needles of rhatanine. Kreitmar represents this body by the formula $C_{20}H_{13}NO_6$. It is insoluble in cold water, alcohol, and ether.

ESTIMATION OF SULPHURIC ACID.

HEMPEL† proposes to employ the following method for the estimation of sulphuric acid in waters. It is founded on the insolubility of the sulphate and chromate of barium, and is, strictly speaking, only a modification of processes previously made known. A solution of nitrate of barium, five grammes to the litre, and a solution of chromate of potassium equivalent to this, are prepared; a certain volume of the one solution exactly precipitates an equal volume of the other. When to a known volume of the liquid in which it is desired to determine the sulphuric acid a measured quantity of the barium solution is added, more than sufficient to precipitate the whole of the acid, and the liquid is boiled, there remains in solution a quantity of barium, which, if it were known, would allow of the sulphuric acid being determined by calculation. The amount of this barium is ascertained by means of the chromate solution, but it is difficult to fix the moment when the reaction ceases. The following artifice removes this difficulty. A drop of solution of silver nitrate is placed on a white porcelain plate, and by its side a drop of the liquid to be tested. On contact red chromate of silver is formed at once if the chromate be in excess; but it is important to regard only the immediate colouration, for the liquid having chromate of barium in suspension gives a reaction with silver nitrate after some time.

DULCAMARINE.

M. GEISSLER‡ has obtained from the stalks of *Solanum dulcamara* 0·38 to 0·4 per cent. of a definite non-azotised amorphous body which he calls *dulcamarine*. It is a glucoside, for on boiling with diluted sulphuric acid it gives glucose, and 62 to 64 per cent. of *dulcamarétine*. He believes Wittstein's dulcamarine to consist of albumenoid bodies mixed with a small proportion of the above.

THE LOCALISATION OF ARSENIC IN THE TISSUES OF POISONED ANIMALS.

M. SCOLOSUBOFF,§ of Moscow, has made numerous examinations of the tissues of dogs, rabbits, and frogs, to which he has given known quantities of arsenic in their food. His experiments lead him to the conclusion that arsenic, so far from being localised in the muscles, is specially taken up by the nervous tissue, and afterwards deposited, first in the liver, then in the muscular tissue. He therefore suggests that in cases of suspected poisoning by arsenic, especially if acute, the expert should first of all examine the brain and the liver.

DAMIANA AND MANCONA BARK.

The *Pharm. Zeitung* for December 15, 1875, p. 816, has the following:—"Whilst the Damiana of the Mexican mountains, as already stated in our last report, assumes more and more distinctly the form of a vehicle for designs upon the purse, the West Coast of Africa offers this month a potent substance, which temporarily awakens interest, not as a medicament, but rather as a poison. This is the so-called *manconu* bark, which is used by several tribes of tropical Africa as an arrow poison, and, like Calabar bean, for the conviction of sorcerers and criminals. It is procured from a tree (known in Africa as

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* *Journ. de Pharm. et de Chimie*, p. 461, from *Annal. de Chemich. Pharm.*
† *Ibid.*, p. 459, from *Zeitsch. für Anal. Chemie.*
‡ *Ibid.*, p. 450, from *Archiv. de Pharm.*
§ *Ibid.*, Dec., 1875, p. 410

Tali) of the family Cæsalpiniæ, *Erythrophlœum Guineense*, G. Don. The bark is hard, fibrous, without odour, and when powdered excites violent sneezing. According to Gallois and Hardy, who have experimented on animals with an extract prepared from the bark, its final effects are those of a muscular and heart poison, so that it is associated in properties with digitalis and hellebore, a fact which is scarcely favourable to its employment in medicine.

DEATH FROM HYDROCYANIC ACID.

A Poison Cupboard the Cause of an Accident.

EARLY on the morning of December 22, Harold Keyworth Austin, aged 16, apprenticed to Mr. Hill, chemist, of Reading, was found dead, lying on his bed, having taken a small quantity of Scheele's hydrocyanic acid. The effect seems to have been instantaneous, owing to its having been taken on an empty stomach. He was the second son of Mr. B. J. Austin, of Reading. The melancholy event excited wide-spread sympathy, the predominant idea at first being suicide under temporary insanity. This was the finding of the coroner's jury.

Since the inquest was held most important evidence has come to light, and we have received the following report written by the uncle of the deceased, Dr. J. W. Keyworth, of Birmingham.

"To all who knew Harold Austin as a bright, joyous youth, heartily happy in his home, his chosen occupation, and his surroundings, it was simply incredible that he should have destroyed his life by an insane impulse. I have carefully examined into the details of the case, and into facts which have come to light since the coroner's inquest, and I am thoroughly satisfied that no one accustomed to medico-legal inquiry could, after full and calm investigation, arrive at any other conclusion than that the death which we so much deplore was accidental; and this conviction is shared by all to whom the facts have been submitted.

"I learn that not the slightest indication of mental aberration, of depression, or of excitement, existed on the day prior to the event. Nothing whatever occurred in demeanour or conversation to attract the attention of those who were most closely associated with him, and at night when he retired to rest he seemed perfectly calm and natural. It further appears that he was constitutionally subject to nervous headaches, and was aware that chloral hydrate was an efficient remedy for these attacks.

"This drug, which is deadly in full doses, was kept, I find, in solution, ten grains to the drachm of water, in the poison-cupboard, alongside of Scheele's prussic acid, both bottles being of blue glass, stoppered, and exactly alike, excepting a slight difference in size. The labels, of course, differed, but it is worthy of remark that the word 'Poison' was much more distinct and noticeable in several respects upon the chloral hydrate bottle than upon the prussic acid bottle. Moreover, he was shortsighted. On the morning of the sad occurrence he seems, from unquestionable evidence, to have gone down to the shop, suffering from headache, and almost completely dressed. He lighted a gas-burner at a considerable distance from the cupboard, took out, by mistake, the bottle of prussic acid, went to another cupboard for a small minim measure, and, returning to his bedroom, locked the door, as was his usual practice, even if he went there during the day. He then lighted a candle, and (supposing the bottle to contain chloral hydrate) measured out what he knew to be a proper dose, replaced the stopper, mixed the dose with water in a drinking mug, and drank some of the contents. Is it likely, is it credible, that one bent on self-destruction would have taken these precautions?

"The use of a drop measure implies the intention to take an exact dose, and putting this dose into the water shows that it was not his wish to take poison. In all cases of intended suicide by prussic acid the poison is taken without regard to measure or dilution. All the circumstances of his recent and past history, his natural temperament, his habits, his personal character, into all of which I have minutely inquired, render it impossible to believe anything else than that a most unhappy misadventure has been published to the world as suicide under temporary insanity.

John W. Keyworth, M.D.
(Emscote House, Birmingham.)

Reading:
December 28, 1875."

THE RAPE OF THE TOGAS.

(A Story for very Young Readers of the Next Century.)

ONCE upon a time there was a large and beautiful island, known to all its inhabitants as the pride of the ocean and the gem of the sea. This island belonged to a very rich and powerful prince, named Jonbul. Prince Jonbul had been in his youth a great warrior, and had not only conquered all the other islands near his own, but was always picking quarrels with the princes of countries many miles away. He used to send his army by shiploads to fight these nations, and as his soldiers were very brave and stuck at nothing, they generally got the best of it. So Jonbul became very rich, and as he grew old very lazy too. He began to eat and drink a great deal more than was good for him, till he at last got so fat and contented that he never troubled himself about fighting. Now the people of the island which Jonbul governed had increased so fast that they had become quite a big nation. They were, however, on the whole, very loyal and happy, for though the laws of the country were very strict, and they were made to pay a good many taxes, in their private concerns they had always done pretty much as they liked. But now that the Prince had grown old, and studied his own comfort too much to bother his head about foreign matters, he began to turn his attention to the affairs of his subjects. And very much his subjects regretted it. Like most old people who have been accustomed to a busy life, Jonbul became in his dotage very fussy and meddlesome. He began first by making a tour of the island, stopping at every large town and every little village, and never without finding something amiss that needed improvement. If he saw a chimney smoking he would have it pulled down; if he encountered a dog without a collar he had it killed; if he found little boys bathing in a river he had them well flogged, because he said they made the water dirty. These and other fancies of the Prince created, as you may suppose a good deal of grumbling, and some people called it "harassing legislation." But Jonbul was a very obstinate old gentleman, so he took no notice, but went on putting his finger into all his subjects' pies. Now you must know that in the island I am telling you about there were all sorts of quarries and mines, in which the poorest part of Jonbul's subjects used to work, digging out all manner of beautiful stone and marble, and every kind of metal you can think of. And others, who were better off, and more cunning, and to whom all these mines somehow seemed to belong, sold the things that were dug up for them to what was called the middle class. It was called "middle" because the people that belonged to it were more clever than the bottom, and not so wicked as the top class. The middle men were the best and most useful of all Jonbul's subjects, because with the stone they made houses and bridges and statues, and with iron steam engines, and railroads and ships. (For in those days they made even their war vessels of iron, like those which, as you know, have been lately fetched up from the bottom of the sea). Now this middle class was made up of a number of divisions called societies. There was an artists' society, and a chemical society, and a mechanical engineers' society, and an argonautical society, and many others, the names of which I need not ask you to remember. But one, which held a foremost place among them all—and this is the society I am going to tell you a story about—was the Bellallen society. It was so named in honour of two men who were, so to speak, the founders of the craft which its followers pursued.

The members of this society were workers in what were called the useful metals. They made all kinds of implements, such as ploughs, and swords, and guns, and the pocket knives which you see in old museums. They were the most indispensable of all Prince Jonbul's subjects, for without them the rest of the nation were quite helpless. Farmers depended on them for the success of their crops, soldiers came to them for weapons, and, deprived of their aid, even schoolboys would have ceased to whittle their hockey sticks and tipcats.

Now Prince Jonbul, in the course of the journey I have told you about, discovered that some of his subjects were, as it was called, "making money," by selling to other countries implements which they bought of the Bellallen Society, and he also found out that schoolboys and others sometimes cut their fingers by carelessly using the knives and similar weapons with which these subjects of his provided them. So he came to the conclusion that it was just a case for his interference. Now you must remember that the Prince had a number of advisers, which he called Parliament, and when he did not know exactly what to do himself he used to ask Parliament to help him. So they all consulted together for a long time, and at last the Prince issued a decree that the Bellallen Society should no longer make or sell any more implements without his special sanction. When this proclamation became known, all the members of the Bellallen Society were, of course, very much frightened. But when they assembled and talked it over amongst themselves they began to think that perhaps it would not be such a bad thing for them after all.

So they sent a deputation to Jonbul to represent their case. After considerable delay (as was the custom in any matter which was laid before Parliament), the Prince informed them that he would permit them to continue to exercise their craft, upon the following conditions:—First, they were to appoint a council or representative body of their own, such as he should approve; secondly, that no one should be allowed to manufacture or expose for sale any of the implements hitherto made by the Bellallen Society without the special permission of the said council; thirdly, that every person to whom the said council should extend its indulgence should be provided with a toga of the kind and pattern which the Prince had selected; that he should ever after wear this toga in place of any other outer garment, as evidence of his admission into the Bellallen Society; that no person should be allowed to wear a similar toga but such as were so qualified, and that the said toga should be sufficient to mark them out from the rest of the world as qualified and permitted to make the implements of the Bellallen Society. Further, that for every candidate thus admitted a premium of ten guineas sterling should be given to the Prince, as a recognition of his protection and of the monopoly they enjoyed. And, lastly, that before any candidate was eligible for election into the society he should give evidence of having himself worked for three complete years in the mines from which the metals used by the Bellallen Society were obtained.

Now, if you have been able to understand all these conditions, you will agree with me that the poor members of the Bellallen Society were likely to have a bad time of it. Their apprentices, too, would have to work very hard in the mines, and then the money which they had to pay to Prince Jonbul, before they could set up in business, was a large sum for them to spare. But they tried to make the best of it, and consoled themselves by thinking that in a few years they would reap the benefit, for the difficulty of entering the society would be so great that very few would care to attempt it, and then they would have a wonderful monopoly, and be able to make a great deal of money. In the meantime the first thing they had to do was to elect a council. This council was for the purpose of jealously guarding the togas that Jonbul had decreed all Bellallens should wear, and also of being always on the alert to prevent any intruders from exercising their craft, who had not been lawfully qualified. So they all met together to choose these representatives. But every one they tried to elect said he was too busy with his own affairs to spare any time for the benefit of others. Now you must know that the inhabitants of the island were generally very long lived, and even Jonbul, old as he was, had a grandmother, whom he always consulted when he was planning fresh laws. The Bellallen Society fortunately possessed a great many grandmothers, as well as many great-grandmothers. When, therefore, they were all, as I have told you, almost at their wits' end to know what to do for a council, the happy thought all at once occurred to them of appointing their grandmothers! So about a dozen of these old ladies were forthwith installed in office. Prince Jonbul highly approved of the Bellallens' choice of representatives, and immediately delivered into the custody of the council the togas which I have told you about. The Prince had had a large number of these robes made, sufficient to last for a number of years, and he gave the Bellallen Council clearly to understand that, whatever happened, they should have no more till all of these had been lawfully bestowed. I have not much to tell you about this toga, for it was a very plain sort of garment, and as Jonbul was extremely economical it was also made of the coarsest material. The Bellallens were, nevertheless, proud of it, because no one but themselves and those whom the council admitted into their society dared to wear a similar gown. At first the old women, the grandmothers, were very careful of the togas, and had each one folded up separately, and sprinkled with camphor and bitter apple powder, to keep away moths and other insects. And when the apprentices, who, you will remember, had to work very hard and pay a good deal of money before they earned the right to wear one, came forward to claim them, they used to make a great deal of fuss about giving them. And for a while everything seemed to promise well for the future of the Bellallen Society. Many more members died or dropped out of the society than there were fresh ones to take their places. They were able to get more money for their implements, and were thought a good deal more of by the other societies and the common people. But by-and-by the old grandmothers began to be less careful about the custody of the togas, and would let them get dirty and soiled. Every now and then the members of the society remonstrated with their grandmothers on their carelessness, and reminded them that the togas were the only protection they had against other people setting up in business against them. They said how important it was they should be put away in a safe place, where thieves could not get at them, and where they would be safe from fire. But the grandmothers were, as you may guess, very silly old women, so they took no notice of what the members said, but went on stowing away the togas in a rotten old wooden building, which they called Gloomsbry.

Now you must know that one of the other islands which, as I told you at the beginning of my story, Prince Jonbul had conquered was situated not very far from his own island, and it was called the Emerald Isle, because the rest of Jonbul's subjects used to say the inhabitants were green. Whether such was the case the end of my story will shew. Now the people of the Emerald Isle had for a long time been a great deal of trouble to Jonbul, and were never happy unless they were quarrelling either amongst themselves or with their neighbours. So, when the Prince had finished his journey through his own island, he thought he would make a tour of the Emerald Isle. So he set out on the expedition immediately, and when he got to the island he found that there was a sort of Bellallen Society there too. And he saw that the people were doing more mischief (as he thought) to themselves than had ever been the case in his own land. So he was very angry, and issued a command that no one, under pain of death, should make or sell such things any longer, except they paid him money and wore the same togas as his own Bellallen Society. The Prince's edict caused, of course, a great hubbub and uproar in the island, but they all knew that Jonbul was, as I have told you, very obstinate, so they sulkily submitted to the new law. Well, after a little time, the Emerald Islanders found their way over to Jonbul's own island, in order (as they said) to work in the mines and win the Bellallen toga. But as soon as the members of the society heard they were come they sent letters and petitions to their grandmothers in council, warning them to be more than ever careful of the safety of their togas. But, as usual, the old women were too lazy to bestir themselves, and two of them, named Hampson and Frazer, told the members it was very wicked of them to think that an Emerald Islander could be dishonest. But all this time their "green" neighbours were preparing their plans, and at last, one dark night, when all the old women were asleep, they broke into the wooden house at Gloomsbry and carried off every toga it contained. I shall not attempt to describe to you the rage and dismay which filled the hearts of the Bellallens when they discovered this treachery. They hastened to Prince Jonbul and related to him the disaster. But the old Prince only laughed in their faces and told them they should not have trusted to their foolish grandmothers. So the Bellallen Society was at an end. All the results of long years of privation and toil were swept away, for the island swarmed with the marauders, who did a roaring trade, arrayed as they were in all the unblushing effrontery of Bellallen togas. So the poor members of the original society, after indulging in the luxury of drowning every grandmother they could lay hands on, burnt their effects, and emigrated in a body from the country. In a few years, as you are aware from history, the island which Jonbul had once so proudly governed went wholly to the dogs.

THE CHEMIST AND DRUGGIST

☞ *For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.*

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Editorial Notes

DISPENSING FRAUDS.

A STARTLING report, by Mr. A. H. Allen, public analyst for Sheffield, has been published within the past few days, and having been quoted by the *Times* and other London papers, is doubtless by this time serving as useful copy for the majority of the provincial journals. The tendency of this report, which we print in full elsewhere, is to cast a halo of disgrace around the pharmaceutical trade generally, and to implant a lasting suspicion in the minds of medicine takers. The impression which the paragraph in the *Times* conveyed to the public was that if a prescription contained an expensive ingredient the chances were about 1 to 2 that it would not be honestly dispensed. Now any such theory as this grossly misrepresents the character of chemists and druggists. With such vague information as the report gives us it is difficult for the trade to defend itself. It appears that twenty druggists were visited, and that these, with but few exceptions, were quite other than dispensing chemists of the first class. Of the twenty prescriptions prepared, three were found at fault, as stated in the report. The health committee, it is stated, have decided not to prosecute on this investigation, but all the local druggists have been warned of their liability to prosecution. We regret extremely this decision of the Sheffield health committee. If they did not intend to face a court with this attack on the druggists they were not justified in letting their report go forth to the whole country as if it were a proven case. It is not for us to question in the faintest degree the correctness of the analyses. No doubt Mr. Allen is fully competent to undertake such, and we by no means imagine any bad faith on the part of any one connected with the authorities. All the same, it would have been much more satisfactory to have had the cases investigated. We should like to have had the analyses checked, the prescriptions produced, and the offenders pointed out and punished. It is possible that some of these may not have been registered chemists at all: the outside public has shown not unfrequently a hazy notion of the boundaries of the trade. It is possible, too, that some of the prescriptions were not themselves too legible. These guesses may perhaps be far-fetched, but in the face of modern experience it is almost too much to ask us to rely implicitly on unchallenged analytical statements, and to condemn their assumed criminals unheard. But, however this may be, it is difficult to understand what right the health committee had to warn "ALL the local chemists of their liability to prosecution," as the *Times* says they did. Surely those who made the prescriptions up correctly and those who were not asked to prepare them at all are not liable even under Adulteration Acts. Finally, we would remark that we have had an intimate acquaintance with the insides of many pharmacies in London and the provinces, and have never known any proprietor or dispenser even conceive the idea of securing an extra penny by such a contemptible fraud as that said to have been discovered in Sheffield. It is not the desire, nor is it to the interests of the respectable majority of pharmaceutists to shield the few mean ones in their midst, nor to be classed in one group with them.

THE USE OF FLIES.

The article we published some time ago, by Mr. Emerson, of Hartlepool, on "The Use of Flies," occasioned no little interest among some of the inquisitive Americans. A correspondent of the *Scientific American* (F. C.) sends to that journal the result of some careful observations made by himself on the parasites that infest flies. "It is not my purpose," he says, "to dispute the theory advanced by Mr. Emerson, that flies are scavengers of the atmosphere, and that, while flying through foul places, they collect on their bodies various organisms, which they feed upon at leisure. My desire is only to draw attention to the fact that the common house fly (*musca domestica*) is at certain seasons possessed of parasites. In examinations made during the summer months, I have failed to detect the parasites; but in the autumn, as a rule, they can be discovered in large numbers around the *coxa* (the joint of the leg that is attached to the thorax): and when disturbed they become very active, running up and down the spines or hairs of the fly. They somewhat resemble in form the *acarina tellarius*, the little red mites of our hothouses. They differ from them in having but six legs; and, in fact, they possess every quality, excepting wings, necessary to constitute perfect insects. They are half a line long, and, by the unaided eye, can be seen as mere specks, and therefore do not belong to the animalcules which represent the smallest and most imperfect forms of life. By placing a fly possessed of these parasites upon a piece of clean glass, and then killing the fly, the parasites will immediately leave the dead body and wander away upon the glass. By holding the glass up to the light, the parasites can be seen as atoms, moving. Under frequent careful microscopic examinations I have never observed that these parasites were eaten by the fly. On the other hand, I am very much of the opinion that the fly is consumed by the parasite. In every case of my observation the fly possessed of these parasites was in a sickly condition."

SALE OF QUININE WINE.

We were asked a month ago whether it was necessary for a dealer to take a sweets license in order to sell quinine wine *not* prepared in accordance with the Pharmacopœia, but put up as a patent medicine and retailed by a duly licensed patent medicine vendor. In reply to our inquiry on that subject the Commissioners of Inland Revenue inform us "that the holder of a patent medicine license does not require a sweets license to enable him to sell quinine wine not prepared in accordance with the formula in the British Pharmacopœia, but put up as a patent medicine, and with the proper stamp affixed to each bottle."

SALE OF ALCOHOL FOR SCIENTIFIC PURPOSES.

Another Inland Revenue query was lately submitted to the Board by Mr. Randall, of Wareham. He asked if it was legal to supply spirits of wine to surgeons for preparing pharmaceutical articles, and likewise to professional men for scientific purposes.

To this the reply returned was "that a license is by law required by every person who sells spirits.

"In the event, however, of a small quantity being required for strictly medical or scientific purposes, of highly rectified spirit such as could not ordinarily be obtained from the licensed trader, the Board would not in such a case interfere with the supply of a few ounces by a chemist not licensed for the sale of spirits—but the application for such spirit, and the sale of it, must be strictly limited to such purpose, and strict proof to that effect would be required in the event of any complaint being made of a violation of the statute."

OLD CORKS.

Mr. J. B. Moore, of Philadelphia, explains in the *American Journal of Pharmacy* how he treats the old corks which, after wandering to and fro in the world, think to find an old age of peace and rest in his establishment.

"I have a drawer behind my dispensing counter," he says, "in which are thrown all old corks that are unfit to re-place in bottles, rejecting, of course, all corks taken from bottles that have contained substances of a greasy nature, or of unpleasant odour, and after a sufficient number have accumulated I put them into hot water, soak them for twenty-four hours, and then wash them well with several portions of clean water, place them in a wide-mouth jar or other suitable vessel, and pour upon them sufficient of a mixture consisting of one part of muriatic acid and fifteen parts of hot water. They are set aside and allowed to stand for a few hours, with occasional agitation. They should then be removed from the liquid, thoroughly washed in clean water, and put away to dry, when they will be found to be almost as white and fresh-looking as though they had never been used. Those which are sound and unbroken may be picked out, and will be found good enough to use for almost any purpose. The rest may be selected according to quality and appearance, and used for such purposes as the judgment of the pharmacist may dictate. The worst can be placed in bottles which are used for small sales, and will obviate the use of new corks. Some that are broken, and present a ragged or rough surface, may be trimmed off and improved very much in appearance by the judicious use of a sharp knife."

NUTMEGS AND MACE.

An American journal tells a story which is worth preserving, and which is probably true. Pharmaceutists, we presume, are all well aware of the intimate relations between nutmegs and mace. But, as the sequel will show, this knowledge is not a universal possession even among those who might be expected to have an acquaintance with the natural history of the fruit in question. The nutmeg, like all other spice, grows in tropical countries. The fruit of the nutmeg tree, especially as it approaches maturity, is very like a large yellow peach. At maturity the outer hull opens, and if not gathered the valuable product would soon fall to the ground. The mace is the second coat which covers the nutmeg, and almost envelopes the dark, parchment-like, impervious hull, or third covering of the nutmeg. When the product is gathered the mace is of a deep red colour, and is taken carefully from the hull which still encloses the nut. Then the hull is broken and the nut taken out, when it is ready for market.

In the palmy days of the "Hon. East India Company," all the company's possessions were governed by twenty-four gentlemen, called the "Hon. Court of Directors," who had spent their lives from early manhood to middle age in India, were usually the company's most distinguished civil and military servants, and were supposed to know everything pertaining to the interests of the great corporation. The office of the "Hon. Court of Directors" was in Leadenhall Street, London, whence they appointed all officers, civil and military, from the ensign to the governor-general. They superintended, also, the sale of all merchandise and products of India, and finding at one period that the mace sold more readily and was more valuable than the nutmeg, they wrote to the government in India to cultivate more of the mace and less of the nut.

TAYUYA.

Tayuya has recently been imported into France from Brazil, where it was discovered by M. Ubicini, a naturalist, who found it in use amongst a negro tribe as a remedy in cases of syphilis, a disorder which had extensively prevailed amongst them. It is at present under trial by M. Dujardin Beaumetz, and although proof of its efficacy is at present in suspense, it commands a very high price in Paris.

Tayuya, Tayuia, or Taguga, appears to be the vulgar generic name of certain cucurbitaceous plants of the genus *Bryonia*, but there is considerable doubt, according to Mr. Stanislas Martin, as to the species to which the plant possessing the virtues now claimed should be referred; seeds, however, have been sent over, so that the matter will probably be settled before long. Martius in his "Materia Medica of Brazil," apparently describes the same series of plants, or rather their therapeutic effects, under the synonym of *Trianosperma*. In this author's great work, the account of the natural order Cucurbitaceæ has not as yet been published, therefore it is difficult to consult authorities on the point. There is a specimen of *Bryonia Tayuya* in the Herbarium of the Natural History Museum of Paris, according to Mr. Martin, and Mr. William Southall lately found in the Herbarium at Kew two specimens, one of which answered to the Brazilian description as far as it could be compared. There is some doubt as to the nomenclature of the other. The root of Tayuya as received in England is broken into small pieces, therefore it is difficult to describe its general characters, but it is said to be elongated and tuberous—napiform (Martius).

A tincture has been prepared from the root, of which 14 drops are stated to be the maximum dose, commencing with one drop and increasing progressively; it must, therefore, be a medicine of some power. The powder is stated to be used in Brazil for resolvent poultices.

Martius, in his "Materia Medica of Brazil," before quoted, gives a wonderful account of the virtues of Tayuya. Of *Trianosperma Tayuya* he says it is in small doses emetic, in larger drastic; it useful in malignant, gastric, and putrid fevers; in the bite of rpents, in syphilis, in dropsy, and in obstructions of the abominal viscera; it is peculiarly efficacious in affections of the ver, gout, amenorrhœa, mania, melancholia, epilepsy, elephaniasis, &c. He also gives directions for its use in powders, pills, otions, and poultices, and after this an account of its proximate constituents, after the modern manner. The time has long passed when such an account of the virtues of any drug could appear in an English Pharmacopœia or Materia Medica, and it takes one back so far that we could hardly suppose it could have been written in the nineteenth century. Tayuya will now, however, have a fair chance of proving its powers, and we may hope that it will justify its pretensions as well as its compatriot and forerunner jaborandi has done.

RECLAIMING BUTTER.

A startling report has been published by the *Glasgow News*, disclosing some almost incredible facts in relation to the butter trade. The journal named met with a trade circular, some time back, issued by a firm established in Leith and Glasgow, offering to reclaim old butter, removing any taste of tallow, grease, and also bad smells, &c., at the same time slightly increasing the weight, at the rate of 7*s.* 6*d.* per cwt. if in casks, or 10*s.* 6*d.* per cwt. if in Irish lumps. "Any kind of old butter out of condition," said the circular, "and heated qualities, made suitable for table use again, and it becomes quite firm."

In order to test these promises two gentlemen were commissioned by the *Glasgow News* to make preliminary inquiries, as probable customers. They were informed that grease-butter, or even "scrapings" (a technical term for refuse butter), could be turned out either in the form of finest tub butter or Irish lumps, according to the quality of the stuff originally sent; that butter treated by this process had hitherto given entire satisfaction except in one solitary instance, that of a Liverpool firm, which was particularised; also that at the Leith works of the firm the amount daily sent out was, on an average, 35 cwt. They therefore agreed to send a sample for treatment, and the following course was adopted:—A Coleraine butt of grease-butter, sold for lubricating purposes, was purchased, and there was incorporated with it a small quantity of Russian tallow, some of which had passed through the printing-office machinery, and had absorbed particles of blacklead and mineral oxides from contact with the bearings of the shafting. A common tallow candle, from which the wick had been removed was also added. The compound and the tallow candle were carefully melted into the grease-butter, and, notwithstanding the offensive character of those additions, the butter was so decomposed as completely to disguise them. Thus prepared, the firkin was sent to the works, with a request that it be turned into "lumps of a bright yellow colour for sale in the English market, and with a stubble-grass smell." The firm characterised the sample as "very bad," but promised to do their best with it. In the course of a few days the butter was returned re-converted, its weight on return being 51½ lbs., against 47½ lbs. when sent for treatment. Were it not for some mineral particles discovered on strict examination it would hardly have been possible to have identified the sample, so remarkable was the change in the whole composition. Those statements are verified by the city analyst, who described the original butter as "in the last stage of rottenness, having a disgusting odour, covered with green mould, and maggotty." If it be true that from these works 3,920 lbs. of this converted butter has been issuing daily to all parts of the kingdom, we may all indulge in a shudder at the thought of the possible lubricants on which we have been regaling of late. The narrative reflects the greatest credit on the skill of the manipulators, and the greatest discredit on the commercial morality of those who have employed them.

TRANSPORTATION OF FRESH MEAT.

The most important problem of transporting fresh meat without the aid of tins, tallow, or chemicals will yet, it may be hoped, be triumphantly solved. Some spirited Frenchmen have made some very promising experiments with carcases from South America, and quite lately the most successful attempt yet recorded was executed by some American shippers.

About forty tons of meat were sent direct from New York to Liverpool, and thence by rail to London, for the Christmas market. Owing, however, to the Smithfield dead meat market having been closed three days in consequence of Christmas day and the two ensuing holidays, the meat had to be kept three days longer than would have otherwise occurred; yet, on the day it was sold, Tuesday, the 28th ult., it was found to be in excellent condition. The method of preserving is at present a trade secret. All that is known is that the vessels are specially prepared for the service; that each quarter of meat is first wrapped in rough cloth and then placed in huge tank-like boxes, each box having within it a fan which is moved by steam power; and that outside each box there is a thick covering of ice. A larger consignment is expected in about ten days, and it is said that plenty of capital and much skill are employed in this effort to bring dead meat fresh over the more than 2,000 miles which separate New York from Liverpool.

DR. RUDDOCK.

We much regret to record the death of Dr. E. H. Ruddock, one of the most widely-known and energetic homœopathic doctors in London. Dr. Ruddock had pushed his way from very humble origin to a position of high respect and considerable activity. In early life he was a stonemason; taking up with homœopathy he became acquainted with the late Mr. Turner, of Manchester, for whom he first acted as agent. Afterwards he opened a homœopathic pharmacy in Woolwich, and during his residence there attended lectures at St. Bartholomew's Hospital. He became a member of the London College of Surgeons, and afterwards M.D. of the University of Erlangen. Dr. Ruddock practised exclusively as a homœopath, conducted the *Homœopathic World*, and wrote quite a number of homœopathic medical works, many of which have been reviewed in these columns. He died at his residence, Reading, on December 23, of rheumatic fever, at the age of 53.

ESCROQUERIE.

A neat little swindle was practised lately on certain pharmaciens at Orleans. A couple of *chevaliers d'industrie* went round the city, calling at the pharmacies, and offering alcohol on peculiarly advantageous terms. Frenchmen have a weakness for a bargain, and the bait took in a fair proportion of instances. The bulk arrived in the evening, and seemed perfectly equal to sample. The sale had been made for cash, and with the gas burning it was hardly safe to empty the vessels completely. The accounts were therefore paid and the vendors decamped. Next day one of the purchasers went to empty his can, which he found ingeniously divided into two compartments, the lower and larger one containing pure water, the upper one only being filled with alcohol. Prompt information was given, and one of the rogues soon became the guest of M. le Procureur de la Republique, the other, at latest advices, being still on his travels.

A circular has lately been addressed by the French Minister of Commerce to the various Chambers of Commerce, advising them of the existence in London of certain swindlers who practise chiefly on the pharmaciens and manufacturers of chemical products. We have ourselves had some slight experience with the gentry who "exploit the affairs" after this fashion. In one case a worthy physician in Paris who mixes a little in commerce received an order for a large quantity of quinine, the order being accompanied by an ill-looking cheque on some bankers at Wapping! In another instance the would-be customers used stylish looking letter paper, on which was engraved a notice urging their correspondents to notice particularly their initials, and not confound them with another firm of the same name. These spotless merchants had promised a certain housekeeper half-a-sovereign if she would receive [and deliver to them a consignment of goods which they were looking for from Paris. As far as we have known, the members of this "Long" firm have all been Frenchmen. Doubtless they have discovered that our mild and genial laws in relation to debtors are more suited to their peculiar style of commerce than the somewhat sterner edicts against *escroquerie* which prevail on their own side of the English Channel.

REVIEWS

AND

Literary Notes.

Year-Book of Pharmacy, Comprising Abstracts of Papers Relating to Pharmacy, Materia Medica, and Chemistry, contributed to British and Foreign Journals, from July 1, 1874, *to June* 30, 1875. *With the Transactions of the British Pharmaceutical Conference at the Twelfth Annual Meeting, held in Bristol, August,* 1875. London: J. & A. Churchill, 11 New Burlington Street. 1875.

As the green turban of the children of the prophet meets respect and reverence in the eyes of the faithful, so the appearance of the "Year-Book of Pharmacy" awakens kindred emotions in the breast of every true pharmacist. He is grateful to those who have provided so rich a banquet of pharmaceutical fare, whereon his professional instincts feed, and whereby they are stimulated; and his bosom is warmed with emulation which urges him to render a *quid pro quo* to the best of his ability,—to prepare a dish for the next entertainment, when the circling of the months brings it round. If we refer some measure of the excellence of the volume before us to the existence of those which have preceded it, and which generated in their time the feelings to which we have alluded, we trust that the argument will be admitted to possess the *à posteriori* character rather than claimed to belong to the *post hoc, propter hoc* category. If the series of Year-Books be examined it will be noticed that the number of contributions to pharmaceutical knowledge and literature made by British pharmacists has increased year by year—gradually, but undoubtedly so. It may be that research in matters pharmaceutic is not more brilliant than it was ten or twenty years ago, when we looked for light to a few "bright, particular stars" in our limited firmament, but it is assuredly more general, more diffused, and not less useful. The pages of the "Year-Book of Pharmacy" for 1875 are adorned with a goodly number of names of pharmacists, therapeutists, chemists, and botanists, who have successfully essayed to enlighten us on various subjects more or less remotely pertaining to the business of the chemist and druggist. We notice, with pleasure, that a larger number than usual of the contributions emanate from home sources. Attfield and Bentley, Holmes and Howard, Umney and Martindale, Greenish and Gerrard, Wright and Groves, Williams and Pocklington, with numerous others, are always to the front; but many names not so often seen have appeared during the year attached to contributions which promise well for future issues from the same pens.

Salicylic acid and jaborandi are the two recent additions to our Materia Medica which have claimed greatest attention, and which give the highest promise of obtaining the permanent regard of those who combat disease. The applications of the former are to a certain extent tolerably well defined, but the true position of the latter in the list of therapeutic agents cannot yet be so easily determined. A digest of the labours of Kolbe, Thiersch, Godeffroy, Salkowsky, and Neubauer on salicylic acid, and Benger's paper on the same, form an important part of the Year Book, and not less justice is done to the work of Martindale, Holmes, Gerrard, Murrell, Planchon, Byasson, and Robin on jaborandi. The single notice of boldo at page 201 indicates how little attention has been bestowed upon the claims of this drug to be considered a specific in certain disorders of the digestive organs. The cinchona barks are ever recurring objects of inquiry which engage the highest scientific attainments, as evidenced by no less than ten abstracts of papers on the barks and their alkaloids by such men as Hesse, De Vrij, the Howards, and others of lesser note. The mystery which shrouded the nature and origin of goa powder has been removed, and its identity with chrysarobine established by the collective labours of Da Silva Lima, Attfield, and Holmes.

Tilden continues researches on the aloins, and from examinations of the bromine, chlorine, and acetyl derivatives of barb- and zan-aloin, concludes that in the anhydrous state these two varieties are isomeric. A paper by Mr. Greenish on the "Microscopy of Natal Arrowroot" gives interesting and useful particulars respecting arrowroot generally. Mr. Stoddart has a knack of lighting on subjects in a way which is his own: his paper entitled "Pharmaceutical Experiments on the Bristol Rocks" is not altogether devoid of interest. Mr. Symons has earned the thanks of pharmacists by devising a formula which really will give a good acetic liniment of turpentine. Dr. Wright's "Report on the Chemistry of the Aconite Alkaloids" is one of many papers contributed by him to the Conference, of high scientific value. The report states that the new base believed by Mr. Groves to be identical with the "atisine" of Broughton is not so, and that pseudaconitine is not isomeric with aconitine. Mr. Umney's contribution on "Citrate of Lithium" will probably have the effect of introducing the crystals of that body into the Pharmacopœia, in place of the anhydrous salt now described there. The limited oxidation of the essential oils, to which Mr. C. T. Kingzett has for some time directed his attention, bids fair in his hands to yield results of considerable importance to those who have the manipulating and storing of large quantities of these bodies. Mr. Rimmington's observation on the "Conversion of Alcohol into Acetate of Ethyl by the Agency of Cryptogamic Life" in concentrated infusion of quassia suggests further experiments in the same direction, with a view of determining to what extent the formation of the compound ether is affected by the temperature of the exhausting medium.

The impetus given to chemistry in a certain direction by the passing of the Adulteration Act and the appointment of public analysts has disclosed many facts having particular interest for pharmacists. These are noted in the Year-Book. Under the heading "Notes and Formulæ" both dispenser and manufacturer will find many useful hints, and, if we mistake not, each will make frequent reference to this part of the volume. It comprises some articles which might, perhaps, with as great propriety have been included under other headings. On the whole, however, the editor has performed his share of the work well, not only in the choice of matter for abstraction, but also in the arrangement of the abstracts. The abstracts themselves are generally made with a just estimation of the value of the original papers, but certain of the latter, which, with the exception of one or two unimportant sentences, are transferred bodily to the volume before us, would be little less useful for more vigorous pruning. The paper on the "Oils of Chinese Pharmacy and Commerce," for instance, is of very mixed value, and would have borne condensation without injury. More condensed abstracts would give room for the chief points brought out in discussion, where reports of discussions are available. That it is expedient to introduce these may be doubted, but we present the suggestion, and point to the reports of discussions at the Conference meetings in support of our; statement that the exclusion of notices of discussions must also be exclusion of much that is to the full as interesting, and new, and valuable, as many papers.

By-the-by, why not print the list of subjects suggested for research in the Year-Book? We perceive many advantages in this plan, and few, if any, objections to it. Besides the impossibility of losing or mislaying it, to come across the list nearly every time the book is consulted would multiply suggestions to work. As matters stand, a comparison of the list with the papers contributed to the Conference only shows how rarely the subjects of the latter are chosen from the former. One reason for this may be that the subjects suggested are too comprehensive and general for the average pharmacist to work upon. This is because the average pharmacist has little or nothing to do with the getting up of the list. Were it more frequently before him, a channel would be opened through which the problems he meets every week would be likely to find their way to the general secretaries, and being incorporated in the list, the Conference which furnishes the answer to them, would add to its already great and deserved popularity. We venture to think that the printing of the list in the Year-Book in this way would materially aid the committee in its "appeal to the rapidly growing body of cultivated pharmacists to work out some of the problems which constantly present themselves."

The Introduction, by the editor, forms an admirable summary, not merely of the contents of the volume, but of the year's work in the sciences which bear upon the calling of a chemist and druggist, and to such we heartily commend it.

We close this notice with a few statistics. The Year-Book, with the index, consists of 652 pages; of these 232 are devoted to the Transactions, edited by the senior general secretary. The total number of members on August 23 was about 2,750 the following day 46 names were added to the list, and among them we notice many well-known to chemists. At the close of the meeting at Bristol it was decided "that the courteous invitation of the Glasgow Chemists' and Druggists' Association be accepted for the meeting in 1876," and Professor Redwood was elected President for the year.

OUR CONTEMPORARY, *The Garden*, edited by Mr. Wm. Robinson, F.L.S., has always been a journal of extreme value to botanists and gardeners. Its excellence has been greatly enhanced this year by the regular publication every week of very handsome coloured illustrations of new flowers, fruits, or gardening effects. Among the artists employed for this work are named Mr. Noel Humphreys, Mr. Whymper, Mr. F. W. Burbidge, Mr. Hyde, and Mr. Hall.

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THE "PHOTOGRAPHIC ALMANAC," published by Greenwood, York Street, Covent Garden, and edited by Mr. J. T. Taylor, is the ideal of a special year-book. Besides summaries of progress by the editor, it contains about a hundred short practical papers referring to the art by as many different photographers. It is also illustrated by a beautiful specimen of photo-mechanical printing.

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THE JOURNAL *La Pharmacie* of Lyons was prosecuted on December 23, before the *Tribunal Correctionnel* of that city, for the crime of having published in its issue of November 20, "contrary to the promises made in the preliminary declaration, an article treating political and religious matters, thereby rendering the publisher and printer of the said journal amenable to the penalties of article 7 of the law of July 6, 1871." The article referred to was entitled "L'Education: A Messieurs les Etudiants." It was an article quoted from the *Mouvement Medical* of Paris, and was so indicated, but the Court condemned the publisher to a fine of 100 francs, and the printer to one of 50 francs.

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SCIENTIFIC FACTS are never so imposing as when they are discussed by one of those omniscient infallibles, the writers on the penny dailies. A reviewer on the *Hour*, criticising Mr. Richard A. Proctor's new work, "Our Place Among Infinities," tries to show that author altogether at sea when he wanders into chaos. Mr. Proctor has spoken of the earliest stage of the earth's history, when it was, according to his assumption, "a great mass of glowing gas." "Now," says his critic, "we should like very much to know whether any chemist has ever been able to produce a gas which glows of itself or becomes red-hot. Long before such a stage is reached all known gases *explode*, and then nothing remains but a small particle of dust and a vacuum around it. Science, in fact, teaches us that to obtain a gas we must first possess a substance, and, therefore, to form an atmosphere we must first obtain a solid earth."

⁂

WE HAVE received a few specimens of Letts' Diaries for 1876. If any reader wants something different to what he has in THE CHEMISTS' AND DRUGGISTS' DIARY, he will be likely enough to get suited among Messrs. Letts' almost infinite variety. If not, he will be hard indeed to please.

⁂

WE COPY the following from among the "Abstracts" in the *Journal of the Chemical Society*, December, 1875, p. 1269:—"Alkaloids of Jaborandi.—E. M. Holmes ('Pharm. I. Trans.,' (3), v., 781), finds that Paraguay jaborandi, after removal of essential oil, yields, by treatment with alcohol and benzene, small prismatic rhombic crystals, the composition of which seems to be $C_{20}H_{12}N_2O_6$: to this substance he gives the name of jaborandine." On turning to the pages of which the above professes to be an abstract, our suspicion that all was not right here received confirmation. The abstractor has involved himself in error, with a determination worthy of a better cause, and betrays such inaccuracy as must be either disappointing or misleading to every one who consults this sentence. Carelessness is a failing from which every gentleman whose name ppears on the cover of the *Journal of the Chemical Society* hould be free.

⁂

WITH the last number of 1875 Mr. Albert E. Ebert retired rom the editorship of the Chicago *Pharmacist*, which he has so piritedly conducted for eight years, in order to devote his time o his personal business. The publishing committee, we are old, has arranged for the future conduct of the journal by persons eminently qualified for the work, and it will be edited enceforth impersonally.

⁂

AS IF THERE were not enough already a new medical journal, ntitled the *Medical Examiner*, has recently appeared. It claims o be "untrammelled by traditions, uninfluenced by the commercial interests of a medical publisher, and free from the etters of an association." With all these advantages the new urnal does not, so far as we can see, offer any points of superirity over its better established rivals. The proprietor of the ew paper is said to be Dr. Morell Mackenzie, known as a 'specialist" for throat affections, and its acting editor is Dr. Milner Fothergill, late of the *British Medical Journal*.

⁂

AMONG THE BOOKS we have received, and which we shall eview next month, we may name a work by Dr. A. H. Hassall, n "Food: its Adulterations and the Methods for their Detection," published by Longmans, and a new edition (the sixth) of Royle's "Manual of Materia Medica," edited by Dr. John Harley, *vice* Dr. Headland, lately deceased, and published by Churchill. We also have to acknowledge Part IV. of Bentley and Trimen's "Medicinal Plants."

Correspondence

A DISPENSING QUERY.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—I should feel obliged by your inserting the following in your next issue, for the opinion of the various contributors o your valuable journal. The following prescription having been sent to a chemist and druggist to get dispensed:—

℞ Potass. Iodid., ʒii.
Sp. Æth. Nit., ℥i.
Liq. Morph. Mur., ʒiii.
Aqua ā, ℥vi.
One table-spoonful three times a day.

he druggist, observing the incompatibility of the potass. odid. and the sp. æth. nit., wrote to the medical man and pointed it out, but was desired to dispense the same as written, which he did, the result being a dark brown mixture, and the patient refused to take more than one dose. The medical man, upon calling again, told his patient that the druggist had put n the dark stuff instead of the white, wrote another prescription exactly like the first, and sent to another druggist in the town, the result being a clear mixture. Query—Was the first druggist right in dispensing, or was he or the second druggist justified in adding an alkali to neutralise the free acid contained in the sp. æth. nit.

Yours obediently,
V. S.

A NEW INSECTICIDE.—At the last meeting of the Royal Horticultural Society, the Hon. and Rev. J. T. Boscawen called attention to his insecticide, which consists of camphor dissolved n methylated spirits to saturation, and mixed with soft soap to he consistence of cream. When diluted so as to be fit for use with a syringe, this had been found a most efficacious substitute for fumigating in the case of mealy-bug, scale, red spider, &c.—*The Garden*.

MEDICAL GLEANINGS.

At the Surgical Society of Ireland a somewhat novel paper was read by the versatile and learned Reverend Professor Haughton, describing his investigations into the two methods of hanging, namely, by the short drop or the long drop. Some five or six years ago a man named Carr was hung in Dublin, and on the advice of the prison surgeon the drop was made 14 feet, the result being that the man's head was completely cut off. The case aroused considerable indignation, and Professor Haughton made a complete scientific investigation of it for the Lord-Lieutenant. He concluded that the surgeon was completely justified in his recommendation, and that the accident was due to the inelasticity of the rope employed. After a very careful series of experiments with ropes, and observations of hangings, Professor Haughton asserts that the "short drop," which was Calcraft's favourite method, causes an unnecessarily protracted suffering, and kills by strangulation, while the "long drop," which it appears is Marwood's usual plan, occasions death very promptly by the rupture of the spinal column. On the whole it appears from Professor Haughton's investigations that the most comfortable method of hanging is to be sure of a rope with sufficient elasticity, to place the knot under the chin with a running noose, and to drop about 10 feet.

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It yet remains to be investigated whether hanging is really the most merciful method of execution. There seems something peculiarly repulsive in the "rope treatment," and perhaps the same objection would apply to any of these external forms of sudden death. Nevertheless, we should like to know whether hanging is retained in this country in preference to the neat and elegant French method from mere Conservatism or for any scientific reasons. We believe that the sensational theories once propagated in respect to the retention of feeling after decapitation have been fairly disposed of by scientific experiments, although it is true that the tradition of Charlotte Corday's beautiful face flushing with indignation, and her eyes flashing with anger, when her brutal executioner lifted up her head and struck it, still remains one of the rooted elements of French history.

⁂

The editor of the *Practitioner* announces a new feature for 1876, which looks promising if it be indeed true that in the multitude of counsellors there is wisdom. It is intended to ascertain by means of circulars the methods of treatment adopted in specific cases by a wide circle of practitioners throughout the country, and to present analyses of the replies in tabulated form. Quinsy is the first subject thus investigated. Dr. T. Lauder Brunton, F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's, is now the editor of this magazine.

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The *Medical Times* reports a ball at Hanwell Lunatic Asylum on New Year's Eve. Dancing commenced at six o'clock, in the ball-room, which was brilliantly lighted and gaily decorated for the occasion. It was a very interesting sight to see some 400 or 500 persons of "unsound mind" all congregated together and enjoying the dancing either as spectators or executants. The accuracy with which the various dances were gone through was surprising, and save for a slight occasional outburst of excitement on the part of one of the patients, one would scarcely have believed that a large proportion of the company were confirmed lunatics. The proficiency of the patients in dancing may be explained by the fact that certain of them are allowed to practise in the ball-room every Monday evening during the winter months. At eight o'clock dancing was suspended for refreshments, the females being regaled with spiced ale, cake, and other light refreshments; whilst the males sat down to a hot meat supper which had been laid in the dining-hall. Supper ended, each male patient was provided with a pipe of tobacco and an extra mug of ale, which they seemed thoroughly to enjoy. A few comic songs were then sung by some of the patients, after which dancing was resumed, and kept up until nearly eleven o'clock. It speaks volumes for the efficiency of the medical supervision and the care and watchfulness of the attendants that all the proceedings of the day and evening passed off without the slightest unpleasant incident; and the Committee of Visitors are to be congratulated that their liberality in providing such entertainments is so highly appreciated by the poor individuals committed to their care. There can be no doubt that entertainments of this kind are productive of benefit to the patients themselves, and should be occasional events in the history of every lunatic asylum.

⁂

Jaborandi has been strongly recommended by Dr. Laycock in diabetes insipidus; but Dr. Ringer records a case in the *British Medical Journal* in the treatment of which jaborandi was fully tried, but completely failed to diminish the quantity of urine passed by the patient, though, as large doses failed to induce any abnormal perspiration, it would almost seem as if the sufferer was hardly a fair subject. His disease was relieved rapidly by ergot.

⁂

The *Lancet* thinks that there is a tendency to undervalue rather than overvalue medicines at the present time. "We are not converts," writes the editor, "to the mint-water treatment of acute rheumatism. If we have lately made fresh discoveries of the curative powers of nature, we have also made fresh discoveries of the curative powers of medicine. Is it conceivable that such powers should not have applicability to the temporary aberrations of nerve-function which constitute so much of the disease that comes before us? Where is the justification of speaking disparagingly of medicine, when it reduces temperature; when it dilates a pupil or contracts it; when it removes pain as by a magical process; when it alters the complexion and the composition of the blood; when it modifies the capacity of the cavities of the heart and the calibre and the contents of the various tubes of the body, such as the bronchii or the bowels or the blood vessels; when it removes nodes; when it stops hæmorrhage, or alters in twenty-four hours the whole aspect of a skin eruption; when it suspends indefinitely epileptic seizures; and when it induces sleep? When medicine can be shown palpably to have such powers, it is but reasonable to expect year by year the discovery of new uses of it in the treatment of disease."

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There is an interesting account in the *British Medical Journal*, by Dr. David Young, of Florence, of a case of poisoning by chloral hydrate. A gentleman took a whole mixture containing three drachms of the salt, instead of the sixth part, as ordered. He was in a condition approaching lifelessness when the doctor arrived, but by the prompt application of hot water bags and bottles to the stomach and other parts of the body, wrapping the legs in warm flannel, and when the heart began to regain its power, the administration of extract of meat with a little brandy, the patient was at last completely restored.

⁂

In the *Lancet*, Dr. B. W. Richardson recommences his crusade against the general use of alcohol as a therapeutic agent. He narrates how the force of facts has driven him to abandon the faith in which he was educated, and to discover that many of those disorders in which alcohol was thought to be almost essential are best treated with the aid of total abstinence from such stimulants. He gives instances in support of these views, and he also makes some very excellent remarks on those conditions commonly described as cases of debility, and where alcohol is often thought to be the first requisite:—"There is no objective sign of organic disease. The leading symptoms are those of persistent dyspepsia, flatulency, irregular action of the bowels, hæmorrhoids, much exhaustion under moderate physical exertion, and great mental depression under slight mental disturbances; extreme nervous excitability, amounting to hysterical excitement; a condition of urine variable in character, the fluid sometimes of straw colour and abundant, at other times scanty and loaded with lithates; the sleep disturbed, with frequent movements and muscular starts of the lower limbs at the moment of going to sleep; a deficient appetite, and a white loaded tongue. In these examples—as common, by the way, to-day as in former times—the old practice used to consist in trying 'to regulate' the wine or other alcoholic beverage. My experience," says Dr. Richardson, "now is that these symptoms are in nearly every instance *caused* by alcohol, and that the only certainly successful treatment is total abstinence."

⁂

"A Senior Member" makes the following remarks in the *British Medical Journal* on the dispensing of medicines by surgeons:—"Either the principle of general practitioners dispensing their medicines is right or wrong. If right, why should it not be continued? or if wrong, let it be given up. The general practitioners of the present day are much more highly educated men than their predecessors of even twenty or thirty years ago, and the tendency of the age in almost everything is division of labour; and the time, no doubt, will come, if we continue to increase and prosper as a nation as we have done during the last half century, when pharmacy and dispensing will be entirely relegated to chemists and druggists. Still, for a young man commencing practice as a general practitioner, it is a great mistake for him not to dispense his own medicines, which, with coated pills, and concentrated infusions, &c., can be easily done, and without much expense. Giving a prescription, and charging a fee of 2*s.* 6*d.* or 3*s.* 6*d.*, especially in chronic cases, is ruinous practice to a young general practitioner. By so doing, he plays into the hands of his patient and the druggist, who are the real gainers, whilst he and his wife and family, should he possess such blessings, may starve at home; and did not midwifery come to the rescue, many a young general practitioner must pay the penalty of such folly by going to the wall."

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The *Medical Press* gives an extract from the diary of the late Mr. Mewburn:—

"The following statement from the fee-book of Sir Astley Cooper is curious:—

"My receipt for the first year was 5*l.* 5*s.*; for the second 26*l.*; the third, 64*l.*; the fourth, 96*l.*; the fifth, 100*l.*; the sixth, 200*l.*; the seventh, 400*l.*; the eighth, 610*l.*; the ninth, 1,100*l.*

"In 1815 Sir Astley made 21,000*l.*!! A Mr. Hyatt, an ancient merchant, gave him 1,000*l.* on recovery under his care; and Mr. Coles, of Mincing Lane, for a long course of time, gave him 600*l.* every Christmas."

An ancient medical manuscript, discovered some years ago among the bones of a mummy, and lately purchased by Dr Ebers, a German archæologist, is talked of. It is believed by the learned to be one of the lost Hermetic books, and about contemporaneous with Moses. It is not yet completely translated but is expected to throw some light on the practice of medicine in those remote centuries.

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The Philadelphia *Medical Reporter* was taken some little tim back with a peculiarly violent fit of virtuous indignation, in it most malignant form. And this was the style in which it "rounded on" our cherished contemporary, the *Lancet*:—"Ther is one reason, and an obvious one, why the editor should have a controlling interest in the journal. A flagrant instance o the discreditable thirst for gold, at the expense of principle, wa lately shown in the *Lancet*. As noticed in the *Reporter*, Dr Churchill, of hypophosphite fame, wrote, some months since, quack book on an alleged cure of consumption he had made The *Lancet*, with great propriety, refused to notice it, an editorially condemned those journals which had aided the charlatan's object by reviewing it. A fortnight after it devoted th whole of its most prominent advertising page, that opposite th first page of reading matter, to a laudatory advertisement o this very book! Naturally this excites just criticism, an nothing shows more conclusively the cynical contempt for th true ethics of the profession which the *Lancet* often display than this. Such a paper, if it had a soul, would sell it for shilling, and the Devil would get the worst of the bargain Why such a journal continues to receive the support of so man respectable men in England we can only explain on the groun that they regard the morality necessary in theory something very different from that required in practice."

BRITISH EXHIBITORS AT PHILADELPHIA.

AMONG the British exhibitors who will assist the display at Philadelphia this year may be named the following firms more or less closely connected with our trade.

Name	Address	Nature of Exhibit
Adams, John	Victoria Park, Sheffield	Furniture polishes and powders
Aire & Calder Glass Bottle Company, E. Breffit, proprietor	83 Upper Thames St., Lon.	Bottles of all kinds
Allen & Hanburys	Plough Court, Lombard St., London	Pharmaceutical preparations
Atkinson, J. & E.	24 Old Bond Street, London	Perfumery
Australian Meat Agency	113 Cannon Street, London	Preserved meats
Ball, James	12 Duke St., Grosvenor Sq., London	Food preparations
Benbow & Sons	12 Little Britain, London	Perfumery and hair brushes
Bennett, Sidney	40 Curzon Street, May Fair, London	Models of instruments for cure of deformities and injuries
Bennett, T. & Son	70 Turnmill St., Farringdon Road, London	Gold-beaters' skin
Bewley & Draper	23 Mary Street, Dublin	Aërated waters
Brunner, Mond, & Co.	Winnington, Northwich, Cheshire	Chemicals
Bryant & May	Fairfield Works, Bow, Lon.	Matches & wax vestas
Busse, G., & Co.	8 South St., Finsbury, Lon.	Charcoal water filters
Calvert, F. C., & Co.	Bradford, near Manchester	Chemicals, carbolic acid, disinfecting powders
Cantrell & Cochrane	Cromac Buildings, Belfast, Ireland	Aërated waters
Chapman, Edwin, & Co.	10 Duke St., Portland Pl., London	Koumiss
Cliff, John	Runcorn, near Liverpool	Stoneware used by chemists, dyers, &c.
Codd, H.	50 Grove Lane, Camberwell, London	Mineral waters
Corry, W., & Co.	Cromac Springs, Cromac Street, Belfast	Aërated waters
Crosse & Blackwell	Soho Square, London	Pickles, jams, and preserves
Cross, C. & E.	Hallatrow, near Bristol	Chest-expanding braces
Danson, William	Hope Lodge, Poplar Road, Oxton, Birkenhead	Cotton, linseed, and rape oils
Desoto Alkali Company, Limited	Widnes, Lancashire	Alkali and soda
Doulton & Co.	48 High St., Lambeth, London	Plumbago crucibles & fire-places of clay
Evans, Lescher, & Evans	60 Bartholomew Close, London	Chemicals and pharmaceutical products
Gaskell, Deacon, & Co.	Widnes, Lancashire	Chemicals
Gerrard, A. W.	153 Liverpool Road, London	Pharmaceutical preparations
Geyelin & Co.	Belgrave House, Argyle Sq., London	Concentrated food
Gissing, A. S., & Sons	Castle Street, Eye, Suffolk	Biscuits and baking powder
Goodall, Backhouse, & Co.	Boar Lane, Leeds	Sauces, baking powder, quinine wine
Green, John	12 Graham Terrace, Ridley Road, Kingsland, London	Gelatine
Greenway, H.	Ham Street, Plymouth	Plans for hospital
Hickisson, Mrs. M. A.	75 Southgate Road, London	Marking ink
Horn, Thos. Storey	23 Grove Street, Newcastle-on-Tyne	Preserved meat
Hutchinson, J., & Co.	Widnes, Lancashire	Alkalies and chemicals
nman Brothers	Aspley Place, Huddersfield	Aërated waters
Johnson, Matthey, & Co.	78 Hatton Garden, Lon.	Chemical apparatus in precious metals
Jones, Palmer, & Co.	Eastern Works, Tabernacle Walk, Finsbury, London	Sauces, baking, custard, and curry powders
Keen, Robinson, Belleville, & Co.	6 Garlick Hill, Cannon St., London	Mustard, pearl barley, &c.
Kilner Brothers	Gt. Northern Goods Station, King's Cross, London	Bottles and glass for scientific purposes
Kinmond & Co.	Kenilworth St., Leamington	Fluid magnesia
Lang, J. & J.	13 Charterhouse Buildings, Aldersgate St., London	Gum elastic surgical instruments
Lea & Perrins	Worcester	Worcestershire sauce
Ledger, H., & Co.	61 and 63 Lant St., Borough, London	New extract of meat and disinfecting fluid
Lee, Dr. R. J.	4 Savile Row, London	Inhaler for pulmonary disorders and disinfecting purposes
Low, Son, & Haydon	148 and 330 Strand, London	Perfumery, brushes, and soap
Lynch & Co.	171A Aldersgate St., London	Surgical instruments and druggists' sundries
Mackay, John	119 George St., Edinburgh	Flavouring essences, polishes, and varnishes
Marrisen, R. D.	Great Orford St., Norwich	Registered flyer, soap powder, and plate powder
Maw, T.	Windsor Pl., Burmantofts, Leeds	Pickles, sauces, and lozenges
Mayer & Meltzer	71 Great Portland St., London	Surgical instruments and galvanic batteries
Mellin, Gustav	16 Tichborne Street, Regent Street, London	Food for infants
Menier, E.	Southwark St., Boro', Lon.	Chocolate
Morson, T., & Son	Southampton Row, Russell Square, London	Pepsine and general chemicals
Murray, Andrew	67 Bedford Gardens, Kensington, London	Galls produced by insects
Muspratt, J., & Sons	5 Chapel Street, Liverpool	Chemical productions
Newcastle Chemical Works Co., Lmtd.	Newcastle-on-Tyne	Chemicals
Nicoll, Donald	15 Clement's Inn, London	Uninflammable starch and food preparations
Parkinson Brothers	43 Hammerton St., Burnley, Lancashire	Pastry powder
Patehitt, E. C.	Ilkeston Road, Nottingham	Sauces, pickles, anchovy and bloater paste
Pears, A. & F.	91 Great Russell St., London	Transparent fancy toilet soap
Perks, Samuel	High Street, Hitchin, Herts	Lavender water and other productions
Powell, T.	81 High Street, St. Marylebone, London	Self-raising flour
Pratt, J.	227 Oxford St., London	"National sauce"
Price's Ptnt. Candle Co., Limited	Belmont Works, Battersea, London	Candles, glycerine, oils, and soap
Puckridge, Fredk., and Nephew	530, 534 Kingsland Rd., Lon.	Goldbeaters' skin
Pulvermacher, I. L.	194 Regent St., London	Galvanic apparatus, voltaic chains
Rein, F. C., Mrs.	108 Strand, London	Surgical instruments and appliances
Rein, F. C., & Son	108 Strand, London	Acoustic, surgical, and veterinary instruments
Rimmel, Eugène	96 Strand, London	Perfumery
Rossi, A.	81 Bold Street, Liverpool	Cosmetics
Runcorn Soap & Alkali Co., Lmtd.	6 Water Street, Liverpool	Chemicals and alkalies
Schneider, E. A.	4 Cambria Villas, Chesterton Road, Cambridge	Essence of beef, liquid
Silicate Paint Co., the	24 Fenwick St., Liverpool	Silicate paints and colours
Smith, T. & H., & Co.	21 Duke St., Edinburgh	Essence of coffee, essences, aërated waters, and pharmaceutical preparations
Storer, David, & Sons	Sydney St., Glasgow, N.B.	Colours and pigments
Thermo Electric Generator Co., Lmtd.	27 New St., Cloth Fair, Lon.	Thermo-batteries
Theillay, E. H.	Charing Cross Hotel, Lon.	Hair dyes
Turner, Charles, & Son	7 Broad Street, Bloomsbury, London	Varnishes, colours, and gums
Turner, Reuben Panther	7 Market Pl., Peterboro'	Food for infants, cocoas and chocolates
Tyne Vale Chemical Co.	Northumberland Works, Forth Banks, Newcastle-on-Tyne	Chemical products
Universal Charcoal & Sewage Co., Limited	5 High St., Manchester	Charcoals and charcoal manure
Usher, Rufus	Bodicote, near Banbury, Oxfordshire	English medicinal rhubarb and biennial henbane
Waterston, G., & Son	56 Hanover St., Edinburgh	Sealing wax
Weldon, Walter	Abbey Lodge, Merton, Surrey	Chlorine, in process of manufacture
Wheeler, Edmund	48 Tollington Road, Holloway, London	Microscopic objects
White, J. & J.	80 Wilson St., Glasgow	Chemicals
Widnes Alkali Co., Limited	Widnes, Lancashire	Caustic soda and soda ash
Williams, M.	Britannia Varnish Works, Wigan	Varnishes
Wyndham, F., & Co.	37 Eastcheap, London	"Esprit des œufs"
Young, James	Kelly, Wemyss Bay, N.B.	Chemicals
Yuille, Andrew	132 Trongate, Melville Ct., Glasgow	Essences

We can refer any intending exhibitors who may want an agent in Philadelphia during the exhibition to Mr. W. M. Dickson, of 619 Walnut Street, who has for some years represented us in that city.

LEGAL & MAGISTERIAL.

THE BOND FAMILY.

In the Second Divisional Court of the Exchequer Division of the High Court of Justice, on Saturday, December 18, the case of Hickisson *v.* Ashton was heard before Baron Cleasby and a common jury. It was an action for the alleged infringement of the plaintiff's trade marks. The defendant pleaded not guilty, and that the plaintiff had no exclusive right to the trade marks in question.

Mr. Yeatman, Mr. Willoughby, and Mr. Purcell appeared for the plaintiff; Mr. Serjeant Sleigh, Mr. C. Marsh-Denison, and Mr. T. J. Greenfield for the defendant.

The plaintiff carries on business at 75 Southgate Road, N., as the manufacturer of the well-known marking ink, called "Bond's Marking Ink," and the defendant is a chemist, at 11 Nile Street, Hoxton. It appeared that the late John Bond, the original inventor of the marking ink known by his name, left an only daughter, who inherited her father's right to manufacture the ink. She married the plaintiff, who now carries on her father's business. The plaintiff's ink is sold in small glass bottles of a particular shape and size, each of them being corked in a particular manner, and enclosed in a case made of cardboard, covered with marbled paper, on which is pasted a square white label bearing the Royal arms of England, and, among others the words, "Crystal Palace and Royal Indelible Marking Ink," and directions for use. The label also bore the words, "Prepared by the daughter of the late John Bond." The cardboard case is enclosed in a blue paper wrapper fastened by an oval white label bearing the Royal arms of Holland, and words similar to those on the inner label. The plaintiff also sold the ink in bottles enclosed in a wooden pedestal, on which the part of the fabric to be written upon could be stretched by means of a wooden ring. It was shown that the defendant had sold a marking ink manufactured by a Mr. Murphy, who had purchased a chemist's business from the widow of the son of Henry Bond, the brother of the original inventor of the ink. The ink manufactured by Murphy is sold in bottles and cases similar to those of the plaintiff, which are wrapped in blue papers, but of a different shade to those of the plaintiff. On the outside of the whole is an oval white label, with the addition of a square piece, on which are printed the Royal Arms of England and the following words:—"Manufacturer of Indelible Marking Ink to Her Majesty's Army Clothing Department, Bond's Genuine Indelible Phœnix Marking Ink. Original trade mark. Established A.D. 1815. Prepared by the legal successors of the late Henry Bond." It was also proved that the defendant had sold Murphy's ink in pedestals somewhat similar to those of the plaintiff, and labelled in a similar manner. The plaintiff only asked for nominal damages.

The defence was that Murphy had purchased the right to manufacture the ink in question from the successors of the late Henry Bond, and that there was a sufficient distinction between the colours of the wrappers and the wording of the labels to prevent the public being misled into the belief that the two inks were identical.

His Lordship, in summing up, directed the jury that they must say—first, whether there was a general resemblance between the wrappers and labels; and, secondly, whether there was such a particular resemblance between them as showed an intention to deceive and as was likely to mislead.

Verdict for the plaintiff—damages 1*s.* and costs.

His Lordship ordered execution to be stayed for a month to enable the defendant to move.

DETERIORATED LIME JUICE.

At the Liverpool Police Court, on December 15, the first case tried in that town under the Sale of Food and Drugs Act came before the magistrate, and it is of considerable importance to chemists and druggists.

Thomas Jones, chemist, of 62 Great Howard Street, appeared to answer a summons charging him with having, on November 25 last, sold to William Allanson Ibbs a drug (lime juice) which was not of the substance and quality of the article demanded by the said person.

Mr. Atkinson, the deputy borough solicitor, said this was the first case taken under the new Act regarding the sale of food and drugs. Of the defendant the officer had purchased a quantity of lime juice, the purity of which was very essential to the public. Dr. J. Campbell Brown, who had made an analysis of a sample, said:—"I am of opinion that the said sample contained parts as under: 3·88 per cent. of dry, solid matter, including acid corresponding to 2·135 per cent. of crystallised citric acid. The sample is of only one-third of the strength of genuine lime juice, and I am of opinion that so large a dilution as 2 to 1 was not made for the purpose of rendering the article portable, palatable, preserving it, or improving its appearance, and that such dilution was not unavoidable, and that it is injurious to health only in so far as it reduces the therapeutic value of the drug, which is often a necessity of life during long voyages." The purchase of the bottle containing the lime juice was proved. It appeared that the defendant washed out a bottle, put Messrs. Evans, Sons & Co.'s label on it, and filled it with lime juice. The label set forth in the usual way the excellence of the compound, its purity, &c. The defendant now said that he sold the lime juice just as he had bought it from the makers. It was said that by taking the cork out of a bottle the lime juice was liable to turn cloudy and become weaker. He had never sold any of this drug except in this case to the inspector of nuisances. Mr. Atkinson said the defendant was a very respectable man, and they had no suspicion that this had occurred through a desire to defraud. Still the authorities were bound to protect the people. The magistrate said it was an important matter that lime juice which was for export should be of the proper quality. In this case he would impose only 5*s.* and costs. If it had been a wilful case he would have imposed a heavier penalty, and it was as well that this should be known.

In consequence of this report Messrs. Evans, Sons & Co. wrote to the Liverpool *Daily Post*, giving the following statement:—

It is quite possible that this lime juice originally came from us, but the defendant omitted to state when. This information we can supply, he having purchased it in October, 1874, or fourteen months ago. The fact that the juice was kept this length of time, coupled with the admission of the defendant that the cork was out of the bottle, is sufficient to prove to anyone aware of the properties of the drug that decomposition would take place.

The magistrate, they added, seemed under a misapprehension as to the description of lime juice ordered by the Board of Trade to be carried by merchant vessels for the use of the seamen. This juice is preserved from the very deterioration which we mention above by the means of alcohol, which is directed to be added.

We may state that for the last month we have been aware of the fact that the inspectors have been busy in different quarters of the town purchasing our bottled lime-fruit juice for the purpose of analysis, and it is only when they find the decomposed sample sold by the defendant that a prosecution takes place, and we think that if Mr. Jones had but taken proper precautions he would not have found himself before Mr. Raffles.

In conclusion we may give our chemist's analysis of the consignment of lime juice from which Mr. Jones received his supply:—

Specific gravity at 60° F.	1·040
Percentage of free citric acid	8·428

which is equivalent to 13·484 ounces of the acid in each imperial gallon.

The defendant in the case also wrote to the papers that he had stated in court, though it was not reported that he could only account for its becoming weaker through the air getting in of necessity every time any was taken out of the jar.

Another correspondent of the *Daily Post* gave a fuller explanation of the manner in which lime juice is prepared for the use of seamen. 1st. The lime juice is sent to a bonded warehouse and gauged. 2nd. A sample is taken from each numbered cask (after being well stirred up) and sent, numbered and sealed, in a sealed box, to the laboratory, London, for analysis. After analysis, an answer is sent from the laboratory giving the numbers which are pure lime juice and fit for use. The lime juice certified for is fortified by adding 15 gallons of good proof spirits to every 85 gallons of the juice to preserve it, and a sample of the spirit has to be forwarded to London, and must be certified for before being used to fortify. If chemists had the lime juice they sell fortified in bond, it would be a very dear article, as they would have to pay in the first instance a duty of 14*s.* per gallon, as mixed spirits.

CAN A SURGEON CLAIM FOR SERVICES RENDERED BY AN UNQUALIFIED ASSISTANT?

A MEDICAL question of some importance was decided at the Clerkenwell County Court last month.

Dr. E. Godfrey Purcell, of Southampton Street, Strand, and also of King's Cross Road, sued Mr. George Jackson, of Pentonville, for two guineas for services rendered.

Defendant had engaged the plaintiff's assistant to attend his wife during her confinement, under the belief that he was duly qualified. The assistant also attended the infant when born, which afterwards died. Discovering that the assistant was unqualified, defendant refused to pay plaintiff's charges.

The judge said that neither Dr. Purcell nor his assistant had any legal claim upon the defendant, and he should therefore give judgment in favour of the defendant, withcosts.

THE SALE OF SHEEP-DIPPING COMPOSITION.—PHARMACEUTICAL SOCIETY OF GREAT BRITAIN *v.* TEAGUE.*

THIS case was heard at the Ludlow County Court, before Josiah Smith, Esq., Q.C., the Judge, on Wednesday, December 15.

Mr. Flux, on behalf of the plaintiffs, said: The defendant is sued for a penalty incurred under the 15th section of the Pharmacy Act, 1868, by a sale on September 25 last of two packets containing arsenic, he not being a duly qualified chemist and druggist. The defendant is a beer-shop keeper, and the sale, which will be proved, was made by his daughter at his beer-house to a tailor, who there applied for packets of sheep-dipping powder, and was supplied by the defendant's daughter (of course, as acting for him) with two packets made up, each packet being labelled as Sheep-Dipping Powder, and bearing the name of some person other than the defendant as the maker up of it. The sale thus made was so made without any of the precautions or formalities required by the statute. Each packet has been analysed, and found to contain a compound, whereof arsenic forms part, so poisonous that the contents of one of them might destroy the lives of over a hundred persons. There is reason to believe that the defendant has systematically sold such packets; but, in fact, he is not known to the plaintiffs, and they sue, not because of any vindictive feelings, but because the Council of the Society regard the duties cast upon them by the Act of Parliament as a trust to be exercised for the protection of the public, and therefore to bring home to the minds of those who may unlawfully deal in poisons the practical effect of the law, and that by sales of this kind penalties are really incurred, the plaintiffs have caused the action to be brought and press for a judgment in their favour. I produce the printed register of chemists and druggists for the current year, which, according to the Act of Parliament, is evidence. I point to the fact that the defendant's name does not appear therein, as for the purposes of this case conclusive that the defendant is not a duly registered chemist and druggist, and I shall call three witnesses to prove the purchase and analysis of the poison.

The Judge (addressing the defendant): What have you to say to this?

The Defendant: Your Honour, I admit the sale of the packets, and that they contain arsenic, but in selling them I was acting as an agent to Mr. Hollier, of Shrewsbury, to whom I was accountable for the sales; and I did not know that I was liable to any penalty, or, in fact, breaking the law.

The Judge: Are there not very numerous persons who, not being chemists and druggists, sell for various purposes packets containing poison? I may suggest, for instance, packets containing poison for the destruction of vermin, such as bugs.

Mr. Flux: It may, perhaps, be said that in a sense the contents of the packet in question were intended for the destruction of vermin, such as sheep ticks, but I submit that no question arises on this Act of Parliament as to the purposes for which poisons are sold, and that the only question is as to whether the article sold is a poison within the meaning of the statute; that it is such a poison is beyond question in this case, for at the head of the schedule to the statute there appears "Arsenic and its Preparations," and clearly the contents of these packets consist of arsenic, or a preparation of arsenic. I may say that if there are, as your Honour suggests, many persons who sell poisons without being on the register, that state of things exists only by reason of the difficulties in the way of detection and proof, and that wherever a clear offence against the Act of Parliament exists, and can be proved, the Society does not fail to discharge its duty.

The Judge: It may be of importance to the public to obtain these packets without restriction, and apparently no harm can result from the use of packets like these for sheep-dipping purposes.

Mr. Flux: The whole subject of the sale of poisons was carefully considered by Parliamentary committees before legislation on the subject, and I submit that no public inconvenience can result from sales of poisons being made by registered persons only, for chemists and druggists are sufficiently numerous in all parts of the country, and the restriction of sales of poisons to duly qualified persons was deliberately enacted by Parliament, and regarded as for the public good. True, no mischief will result from the use of these poisons for the purposes of sheep-dipping, but Parliament contemplated the misuse of poisons either by accident or design, and that as mischief might result from poisoning there should exist these links in the chain of evidence which might perhaps be means for deterring or detecting wrongdoers which are established by the formalities on the sales enacted by the clauses of this statute. And further, Parliament, when passing this statute, cast upon the Council of the Pharmaceutical Society a measure of responsibility with regard to the administration of this law, and therefore it is that the Council are careful that in the discharge of their duty for the protection of the public they shall not be reproached with negligence, and they have instructed me to attend here to-day and afford the Court all the information which my experience in these cases may permit of.

The Judge: But there are patent medicines sometimes containing poisons. Do you contend that sales of patent medicines expose the sellers to these penalties?

Mr. Flux: I ought, perhaps, to have mentioned that special exemption exists with regard to patent medicines.

The Judge: What are the distinctions of a patent medicine?

Mr. Flux: Clearly this is not a patent medicine, for one of the leading distinguishing points of patent medicines is that they are for the healing of the human body, and I may say that they are sold by persons licensed for such sales, and that the medicines must be stamped with revenue stamps; so that if this were a patent medicine then the defendant would be in the position of having incurred heavy penalties to be sued for under the revenue laws.

The Judge: Then if persons unwittingly sell these poisons would they be liable to the penalties?

Mr. Flux: Certainly; I say so with confidence. What I am pressing for is a judgment, and I submit that judgment for the penalty is right in this case. Whether the judgment should be enforced is a matter which will remain in the discretion of my clients, and, as of course, I shall lay before them whatever recommendations may fall from your Honour in the event of your being satisfied that the defendant acted innocently.

The Judge: I should like to know whether any case under this Act of Parliament has been before the Courts of Westminster—of course by way of appeal.

Mr. Flux: I can say with confidence that there never has been an appeal from the decision of any County Court Judge. There was one case under this Act of Parliament before the Court of Queen's Bench, but that was not by way of appeal from a County Court Judge; and it resulted in the course of action pursued by the Council of the Society being upheld, and the other party having to pay Queen's Bench costs.

The Judge: The fact that there has been no appeal may have resulted from the circumstance that the judgments are for sums not exceeding 5*l.*

Mr. Flux: I understand that in such cases there may be appeals if the parties concur, and I am always careful to throw no obstacle in the way of an appeal; and, on the contrary, I have in other cases offered every facility for an appeal, and I offer to do so in this case. I have an opinion of a former attorney-general which I will read.

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* As reported in the *Pharmaceutical Journal.*

The Judge: In this case the plaintiffs are entitled to a judgment for the sum sued for, but taking all the circumstances of the case into consideration, I strongly recommend the defendant to the merciful consideration of the plaintiffs. It will no doubt be made publicly known that sales of this kind expose the parties to penalties, and that in any future case judgment for the penalty will be given.

Mr. Flux: I shall certainly be careful to communicate to my clients your Honour's views; and I have to ask that the judgment may be in the usual form, and extend to the costs of three witnesses who are in attendance, with solicitor's fee.

The Judge: Certainly; let the payments go in that form.

Trade Notes.

Mr. F. Wheeler has succeeded to the business hitherto carried on by Mrs. E. S. Gason, High Street, Guildford.

Mrs. Gay, of High Street, Stroud, has sold her business to Mr. S. J. Coley, her late manager, and who has been connected with the business for the past 17 years.

Messrs. Austin & Co., of Duke Street, Liverpool, manufacturers of lint and druggists' sundries, have made some changes in their firm, and the business will in future be conducted under the style of Ayrton, Austin & Saunders.

Messrs. Wyleys & Co., of Coventry, have established a London office at 223 Upper Thames Street. They have just issued new books of order forms to their customers, which leave counterfoils to be retained, and are numbered consecutively, so as to facilitate future reference. This idea is new, and is a very good one.

Messrs. W. & J. Burrow, pharmaceutical chemists, of Great Malvern, successors to Lea, Perrin & Burrows, retired from the retail trade on December 31 last, when the proprietorship of their business was passed to Mr. Edmund H. Metcalfe, who had been their chief dispenser for many years. Messrs. Burrow still continue their wholesale business in mineral waters, &c.

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We commence in our advertisement pages this month a concise collection of foreign specialities, which cannot fail to be useful to many of our readers as a reference list. It will be so much the more useful if our foreign friends will use it freely, and to ensure this object we have made the conditions as light as possible. We shall be happy to give full particulars to any foreign house, or to the agent for such.

⁂

Eucalyptus Oil Soap.—Messrs. Whitaker & Grossmith, of Fore Street, have hit on the excellent idea of a eucalyptus soap. They have registered their title under the new Act. As a sanitary soap we think none can be more agreeable than this, and there is every reason to believe that its properties are really hygienic and disinfecting. The odour is quite distinctive and refreshing. In addition to this, the name has an attractive sound, and the soap is likely to become a favourite.

⁂

A meeting of the creditors of Frances Mucklow & Thomas Percival Mucklow, chemists and druggists, 1 George Street, Lozells, Birmingham, was held on the 16th ult., at Mr. Jaques's office, Cherry Street; Mr. C. W. Jackson presiding. The debtors' liabilities were 891*l.* 2*s.* 11*d.*, and the assets 133*l.* 6*s.* 3*d.* Mr. Jaques, who represented the debtors, made an offer of 1*s.* 6*d.* in the pound, which was accepted.

Emulsified Cod-Liver Oil.—Messrs. Evans, Sons & Co., of Liverpool, introduce a cod-liver oil in a state of perfect emulsion, which, although containing 50 per cent. of the oil, has a flavour not at all unpleasant, even to those not accustomed to the oil, and which mixes readily with water or milk in any proportion. For persons beginning to take it this form will be very useful, as the aromatic combination aids the digestion of the medicine. A similar emulsion is prepared by the same firm, containing in addition 4 grains of hypophosphite of lime in each ounce.

⁂

Rimmel's Valentines.—Mr. Rimmel's price list of valentines lies before us, and we notice that prices begin at 12*s.* per gross and run up to 84*s.* per dozen. There are a large number of novelties, some of them very choice. For sixpenny humorous valentines we think "Our Gents and Misses," of which there are twelve varieties, are the best we have seen. They are very cleverly drawn and may lay claim to real wit. To give a specimen:—We have a swell with magnificent whiskers, skating gaily on ice near which is a notice, "Dangerous! Flirts Beware!" Below is "Matrimony." The legend runs—

> Delightfully pleasant, deliciously nice!
> But what will it be if he breaks thro' the ice?

Floral valentines, sachets, fans, and flowers painted on satin, and many other devices, all delicately perfumed, make up Mr. Rimmel's excellently-assorted stock.

⁂

Messrs. Southall Bros. & Barclay have doubled the size of their Prices Current this year, and now give one of the most complete in the trade. As they incorporate in it many of their valuable hints on storage, together with notes on new medicines, it is always useful literature for chemists and druggists.

⁂

Mr. Towle, of Manchester, now puts up his chlorodyne lozenges and chlorodyne jujubes in neat attractive 6*d.* and 1*s.* slide boxes, foil-lined.

⁂

It is stated that a Mr. Arthur Robottom, of Birmingham, England, has discovered the bed of a dry lake in the Slate Range Mountains, filled over an area of 15 miles long by 6 wide with saline crystals to a depth of about 6 or 8 feet. The appearance of the surrounding country clearly indicates that water once stood 60 feet deep here over a large area, the ancient beach being distinctly traceable. The most remarkable fact about this saline product is that in its middle there is a tract 5 miles long and 2 wide of common salt, while on the outside there is a deposit of borate of soda three feet thick, and under this a lower stratum composed of sulphate of soda and tincal, mixed together, from 1 to 3 feet thick. These minerals are all in crystals, the sulphate of soda and tincal forming a solid mass, almost like stone in its hardness. The borate of soda is of a dirty hue, but the salt, which lies above the level of the entire deposit, in some places to a depth of 7 feet, is as white as snow. Analysis of the borate is said to show a percentage of 99·75 of biborate of soda, with only 0·25 of chloride of sodium. It is difficult to understand how the salts have got thus perfectly separated; but if the report be correct the effect ought to be felt in our markets, especially as the deposits are not a great distance from the Pacific coast.

The successor of Liebig in the professorship of chemistry in the University at Munich is Prof. Baeyer, of Strasburg.

A Hint to Advertisers.—Formerly, when a man got tired of the world he went into a cave and lived alone; now he accomplishes the same object by opening a shop and neglecting to advertise.

An Edinburgh tobacconist was lately fined in the mitigated penalty of 50*l.* for having in his possession tobacco which, on examination, was found to contain sugar and liquorice. The full penalty for the offence is 200*l.*

Mr. C. H. Wood, formerly well known in the Pharmaceutical Society of Great Britain, and lately Government Quinologist at Darjeeling, has been appointed Professor of Chemistry in the University of Calcutta. He is succeeded at Darjeeling by Mr. Gammie.

Phonetic Prescription-reading.—Mr. Hans M. Wilder, in a communication to the *American Druggists' Circular*, records a story of an apprentice in a pharmacy who was on the point of dispensing acid nitrate of mercury in a mixture for which *ac. nit. mur.* was ordered.

Elixir of Beef and Iron.—A correspondent, "Blue Pill," sends the following formula:—Liebig's ext. meat, 1 oz.; boiling water, 2 ozs., dissolve; pyrophosphate of iron, 2 ozs.; boiling water, 4 ozs., dissolve; white sugar, 2 ozs.; sherry, 1 pint, dissolve. Mix the three solutions together. Dose—a fluid drachm three times a day.

Condensed Eggs.—A factory has lately been established at Passau, in Bavaria, to work a process for supplying the nutrition of eggs in a condensed form. The method adopted seems to be merely that the eggs are dried and then reduced to a fine meal. This is packed into air-tight tins, and thus a supply of the most complete food is provided in the smallest possible compass.

In a recent case tried at the Stafford Sessions, the plaintiff, Mr. Clarke, of Lincoln, prosecuted the defendant, Mr. Kelly, a medical botanist, for infringement of his patent rights, alleging that the latter had supplied some medicine to a woman for 25*s.* who imagined she was buying "Clarke's Blood Mixture." The jury gave a verdict of "not guilty." In his evidence Mr. Clarke said he paid Government 7,000*l.* a year for stamp duty.

According to the *Midland Counties Express*, the Stone Board of Guardians, wanting to increase the water supply of their workhouse, sent to Mr. Wentworth Scott, the county analyst, a pint and a-half of water for analysis. They received from him this note:—"Be good enough to inform me (1) as to the source or description of said water; (2) whether analysed previously, and with what result; (3) if any suspected contamination, state distance of nearest possible cause of same." The Guardians were dubious whether such information would contribute to a correct analysis, and they decided not to afford the information asked for.

Liquor Drinkers Please Copy.—At the festival of a reformatory institution in America, a gentleman is reported to have said:—"I overcame the appetite by a recipe given to me by old Dr. Hatfield, one of those good old physicians who do not have a percentage from a neighbouring druggist. The prescription is simply an orange every morning a half hour before breakfast. 'Take that," said the doctor, 'and you will neither want liquor nor medicine.' I have done so regularly, and find that liquor has become repulsive. The taste of the orange is in the saliva of my tongue, and it would be as well to mix water and oil as rum with my taste."

A Satirical Writer in the *Birmingham Daily Mail*, alluding to the recent terpsichorean indulgence of the chemists and druggists in the Town Hall, says he hears that the homœopathic chemists of the district intend to hold a *soirée* on their own account in the back parlour of the chief homœopathic pharmacy in the town. During the evening, he says, Professor Belladonna will deliver a lecture on "The Use of the Globules," and many interesting homœopathic specimens will be exhibited; among others, "A Working Man's Wages, as received by his Wife," "The Brains of a Kenealyite," and those of "a Girl of the Period," and other comminuted objects. Jujubes will be provided, and the floor will be laid with a perfectly new poor man's plaster.

The ravages of th Phylloxera among the vines have caused many attempts to be made to discover a new kind of beverage which might take the place of the juice of the grape. According to *Nature*, the Marquis de Villeneuve reports that in China a *pseudo* wine called *Tsien-ia* is much used, which is concocted from a preparation of four plants, common in that country, and mixed together in certain proportions. The plants are dried and powdered, and made into a paste, which is sold in the form of balls or squares at the rate of about 3*d.* a pound. One square or ball will make several pints of a fermented liquor, pleasant to the taste and much resembling wine, which is much sought after by Europeans and others living in China. A factitious brandy is also prepared in the same way, and the manufacture is so simple that with a capital of 5*l.* or 10*l.* to purchase the apparatus, a man may make twenty-five gallons of "brandy" a day. The Marquis de Villeneuve affirms that the "wine" thus produced is of good quality and possesses no injurious ingredients.

Medical Recipes.—An old lady in Bridgeport, Conn., says she is one of the number born to ill luck. She has pasted nearly five thousand medical recipes in a book, during the past forty years, has never been sick a day in her life, and she is growing discouraged. Another patient collector gives some of his medical treasures to the world through the American *Journal of Health.* These are some of his "sure cures for rheumatism:"—"Rochelle salts. Guaiacum. Rub with chloroform liniment. Sleep with your head towards the north. Nux vomica. Wear a chest protector. Nitrate of potash. Nitrate of sodium. Fowler's solution of arsenic. Sleep with a big dog, and give it to him. Kill a big dog, and after taking out his intestines, put your feet where they came from. Magnetism. Galvanism. Bromide of ammonium. Iodide of ammonium. Mustard plasters. Spanish-fly plasters. Bromide of potassium. Iodide of potassium. Lemon juice. Sage tea. Wear sulphur in your shoes. Hard rubbing. Oleate of mercury. Common soda. Capsicum. Radway's Ready Relief. Wear silk. Wear flannel. Wear buckskin. Gin and hemlock. Reynold's specific. Make a necklace of the knots produced by the sting of an insect on "Golden Rod," and wear it next the skin. Citrate of lithia. Exercise and keep it off. Keep as quiet as possible. Colchicum. Morphine. Water cures. Angel's rheumatic gum. Pray fervently. Soft soap bandaged with flannel. Do not eat meat. Do not eat eggs or potatoes. Eat anything you please. Opium. Do not smoke at all. Smoke all you like. Take camphor. Drink nothing but beer. Do not drink anything but whisky. Do not drink anything at all. Do not leave the house. Take a ride out whenever you can. Carry a piece of alum in your pocket. Take Turkish baths. The Turkish bath is one of the worst things for rheumatism. De Soto spring water. Acetate of potash. Burdock seed. Bathe in hot water with pearl-ash in it. Bathe in cold water frequently. Do not bathe at all until you are nearly well. Catnip tea. Wrap fresh lamb's entrails around your neck. Drink brandy. Brandy is very bad for rheumatism. Sleep next to flannel. Go to Arkansas Hot Springs. Go to Doolittle springs—to Saratoga, to Florida, to Bermuda, to the Sandwich Islands, to California, to the South of France, to Mexico, to the Azores, to South America. Wear a horse chestnut in your left hand breeches pocket. Wear a potato in the other. Take Constitution water. Take carbolic acid. Wrap joints with cotton, and cover with oiled silk. Glen Flora water. Get out on the prairies. High land is best for rheumatism. Balm of Life. Magnetic Salve. Rub with kerosene. Mustang liniment. Read Job. Put on hot poultices. Apply hop mashes. Do not swear. Put mustard plasters over the heart. Drink Friedrichshall bitter water. Seidlitz powders. Take a quart of alcohol with a dozen lemons in it. Take spirits of turpentine. Rub with spirits of turpentine. Slippery elm poultice. Electric oil."

PATENTS

[The following list has been compiled expressly for The Chemist and Druggist by L. de Fontainemoreau & Co., Patent Agents, 4 South Street, Finsbury, London; 10 Rue de la Fidélité, Paris; and 33 Rue des Minimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

3756. H. Hanks, of Mile End Road. Neuralgia, tic douloureux, face-ache, tooth-ache, rheumatic neuralgia, sciatica, nervous disorders, nervousness, nervous headache, nervous debility, and nerve pains. Dated October 29, 1875

3920. H. Deacon, of Widnes. Improvements in apparatus for exposing porous materials and currents of gases to mutual reactions. Dated November 17, 1875.

3931. J. D. Allat, of Montpellier Street, Walworth. Improved apparatus for stopping or closing the necks of bottles containing aërated and other liquids. Dated November 12, 1875.

3955. T. Shaw and W. Blackburn, both of Huddersfield. A new or improved means or process of treating or preparing dry soap or other washing preparations in a dry state ready for domestic or other purposes. Dated November 15, 1875.

4005. D. Brown, of Bath. Improved apparatus for stopping bottles. Dated November 18, 1875.

4044. G. Grundy, of Chapel Lane, near Turnstall. Improvements in carburetters. Dated November 20, 1875.

4093. T. Keith, of Shadwell. Improvements in crates or frames for holding bottles. Dated November 25, 1875.

4104. C. Fourneran, of Boulevard St. Denis, Paris. Improvements in the bottles employed for the carrying of chemical productions or other purposes. Dated November 27, 1875.

Letters Patent have been issued for the following:—

7859. W. Netherwood and B. Shaw, of Huddersfield. Improvements in bottles and in the stoppers for the same. Dated May 20, 1875.

1917. R. Millburn and H. Jackson, of New Cross Road. Improvements in the treatment of salt or crude chloride of sodium preparatory to chemical processes, and in apparatus employed in such treatment. Dated May 26, 1875.

2027. A. J. Eli, of Euston Road. Improvements in apparatus for drawing off liquids from casks and other vessels. Dated June 2, 1875.

2125. A. P. Wire and W. Gostwyck Gard, of Dunstable. An improved apparatus for extracting the essence of meats. Dated June 9, 1875.

2398. W. Whittbread, of Liverpool. Improvements in the manufacture of mono-calcic phosphate. Dated July 2, 1875.

2460. T. Griffiths, of Panton Street, and W. Phillips Thompson, of Liverpool. Improvements in the combination and manufacture of certain metallic sulphides and sulphates, and in their application to useful purposes. Dated July 8, 1875.

3153. D. Dow and J. Telfer, both of Glasgow. Improvements in obtaining oxide of manganese from the chloride, which improvements are applicable for manufacturing nitrates of alkalies and for obtaining free chlorine from chlorides. Dated September 8, 1875.

Specifications published during the month:—

Postage 1*d.* each extra.

1875.

1347. T. J. Chapman and H. B. Fox. Bottling aërated liquids. 4*d.*
1329. T. W. Wilson. Bottle crate. 8*d.*
1454. A. Macdonnel. Bottle washing machine. 10*d.*
1463. E. Dame Wymer. Abdominal belts. 4*d.*
1608. A. Martin. Apparatus for capsuling bottles. 8*d.*
1632. H. Deacon. Manufacture of chlorine. 4*d.*
1638. E. Sonstadt. Manufacture of sulphuric anhydride. 4*d.*
1714. J. Mactear. Manufacture of soda. 4*d*
1723. J. C. Stevenson. Manufacture of alkaline sulphates. 4*d.*

GAZETTE.

BANKRUPTS.

Healy, Luke J., West Street, Drogheda, chandler, druggist, and mineral water manufacturer. Dec. 24.

Suffield, Henry, Hednesford, Cannock, Staffs., surgeon. Dec. 15.

LIQUIDATIONS.

(By arrangement or composition.)

Notices of first meetings have been issued *in re* the following estates. The dates are those of the petitions:—

Adamson, William B., Scotswood Road, Newcastle, chemist. Dec. 10.

Clark, James T., Albion Street, Cleckheaton, and Mirfield, boot dealer and manufacturing chemist. Dec. 16.

Clarkson, Albert, Wetley Rocks, Staffs., agent, late Blackburn, chemist. Dec. 11.

Cook, Robertson, Haddington Villas, Romford Road, Stratford, lately. Imperial Works, Bromley, starch and blue manufacturer. Dec. 15.

Fall, Joseph, Wool, Dorset, surgeon. Dec. 7.

Gaskin, Arthur, 2 Bryanstone Mews West, Bryanstone Square, veterinary surgeon. Dec. 31.

Lodge, Robert, Westgate Street, Gloucester, chemist. January 5.

O'Dowd, John Charles, Park Street, Treforest, chemist. Dec. 11.

Souter, John C., 88 Junction Road, Holloway, M.D. Dec. 23.

Spratt, George U., Long Eaton, Derbyshire, late Nottingham, chemist, Dec. 13.

Stedman, James H., East Road, Hoxton, and New North Road, surgeon. Dec. 20.

Tattersall, John, Corn Exchange Chambers, Hanging Ditch, and Walnut Street, Cheetham, both Manchester, druggist, drysalter, and agent. Dec. 22.

BANKRUPTCY CLOSED.

Grieve, John Boden, Carlisle, chemist. (The property has been realised.) Bankruptcy closed December 21.

DIVIDENDS.

Baker, Emanuel (Bkt.), York Place, Portman Square, surgeon, and Brierley Hill and Paddington, brick and gas retort manufacturer. 2nd div. 1*s.* 3¾*d.*, and 6*s.* 3½*d.* to new proofs.

Browne, Arthur H., The Medical Hall, Boyle, Roscommon, apothecary. 1st div. 3*s.* in the £ on 539*l.*

Griggs, Edward Walter (Liq.), Haverhill, Suffolk, chemist. 1st and final div. 2*d.*

Seymour, Almeric W. (Bkt.), Brighton, M.D. Div. 18*s.*

West, Maurice Thomas (Bkt.), Great Dover Street, Southwark, surgeon H.M.N. 4th div. 3*s.* 3*d.* and 5-12ths of 1*d.*

PARTNERSHIPS DISSOLVED.

Crisp & Walker, Swallowfield, Berks, surgeons. Nov. 30. Debts by James F. Walker.

Eames & Co., Ferry Quay Street, Londonderry, chemists. Sept. 30.

Harding & Shields, Alsager, Cheshire, chemists. December 24. Debts by J. Shields.

Hicks & Aylesbury, Edwardes Terrace, Kensington, chemists. Nov. 29.

Nussey, George & Sons, School Close, Leeds, oil importers, dyewood and drug merchants. June 30.

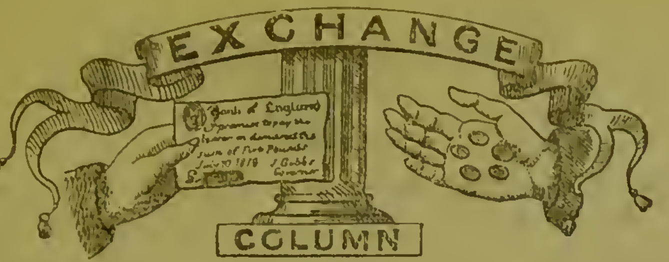
Sanders & Thomson, Stockton, chemists and confectioners. Nov. 29. Debts by William W. Thomson.

Shorto & Bruce, Southampton, surgeons. Sept. 29.

Taylor, Ormerod & Sons, Todmorden, chemists and drysalters. Dec. 13. As regards Anne Taylor.

Varnish to make Wood look like Ivory.—Take isinglass, ℥ss., boil gently in ½ pint water till dissolved; strain; add flake white q.s. Give the wood three or four coats, letting each coat dry before putting another on. Add carmine or ch. yellow q.s.

Silvering Powder.—The silvering powder used to silver brass, copper, &c., by simple friction, is made by mixing carefully one part of chloride of silver with three parts potassæ bitart., previously dried by making it nearly red hot, one part Paris white and a little more than one part of common salt. The brass surface is well cleansed and polished, moistened with a solution of common salt, and the powder rubbed on till the metallic surface is well coated with silver. As the silver is very thin, it is well, after washing and drying it carefully, to varnish it with a colourless varnish like dammar, well diluted with turpentine.



TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Handsome gas stove, magic lantern. Ford, Pontypool.

Pharmaceutical Journal, vols. 4 and 5, clean and complete. What offers? Caveli, Long Sutton, Lincolnshire.

Herbarium, all plants named, useful for the Minor, 2*s.* 6*d.* Tully, Chemist, Tunbridge Wells.

Southall's Materia Medica Specimens, in good condition. Price 15*s.* H. Page, Princess Place, Bishopston, Bristol.

Evan's 4*l.* 4*s.* Materia Medica cabinet; cheap. William W. Graham, Pharmaceutical Chemist, Dalbeattie, N.B.

Confectioner's spice machines, stamps, and quantity of labels to be sold cheap. Medical works; send for list. J. Garforth, Sheffield.

Botany.—A collection of coloured illustrations of British plants, 2*s.* Specimen two stamps. Tully, Chemist, Tunbridge Wells.

Van Buren's "Genito Urinary Organs," 14*s.*; Acton's "Reproductive Organs," 8*s.* Both quite new. Together, 21*s.* 37/147.

Cheap dispensing bottles, flat and oval, 4-oz., 8*s.* 6*d.*; 6-oz. and 8-oz., 9*s.* 6*d.*; 12-oz., 14*s.*; 16-oz., 17*s.* per gross. Andrews, Chemist, Eastbourne.

American drinks machine, Dows, Clark, & Winkle; 8 taps; cost 50*l.*; a bargain. Chemicus, 151 Hoxton Street, N., London.

Valuable collection of precious stones, cut and uncut, 15 varieties, 108 stones, 30*s.*, or would sell separately. R. Halford, Chemist, New John Street, Birmingham.

Sandell's Hair Restorer; Fox's Palatable Oils; Burge's Log; Henry's Nervine. 25 per cent. less than cost price. All new. 20/151.

Royle's "Materia Medica," 5th edition; Roscoe's "Chemistry;" "British Pharmacopœia," 1864; Southall's Materia Medica Cabinet (quite new). What offers? Priestland, 1 Harcourt Place, Scarbro'.

Very good mahogany fixtures, glass labels and knobs to drawers; shop rounds, scales, 5-grain pill machine; iron mortar, &c.; several oil cisterns and sundries; full particulars on application. J. H. D. Jenkinson & Co., Sheffield.

Stone's cough lozenges, Brown's chlorodyne, Hayman's balsam, all at 8*s.* 9*d.* dozen; Wilson's "Anatomist's Vade Mecum," 4*s.* 6*d.*; 11*s.* Crosby's elixir, 8*s.* each. Griffith, Cornhill, Bridgwater.

Materia Medica chest (Southall's), full description, with tests and characters attached to each specimen; very little used; cost 30*s.* What offers? J. Knowles, 8 Torrington Place, W.C.

Copper still, complete; two large powerful electric machines; two mahogany glass show cases, 6 ft. 6 in. by 1 ft., and 5 ft. 10 in. by 2 ft. 6 in.; one large mirror, 7 ft. 3 in. by 2 ft.; one 5-gallon marble mortar, and two large pestles. Wilkinson & Co., 4 Baker's Hill, Sheffield.

Copper still complete, 1 5-gallon marble mortar, and 2 large pestles, 2 powerful electric machines, 2 mahogany show cases, 6 ft. 6 in. by 1 foot 1 in., 5 ft. 10 in. by 2 ft. 6 in.; 1 large mirror, 7 ft. 3 in. by 3 ft. 2 in. Messrs. Wilkinson & Co., 4 Baker's Hill, Sheffield.

Offers wanted.—*Pharmaceutical Journal*, posted evening of arrival; Squire's "Companion," second edition; "Year-Book of Pharmacy," 1870 to 1874 inclusive; breast pump, as Maw's fig. 4; all in good condition. Free to wholesale house. Address, Horton, 171 High Holborn.

Judd's "Metric System," 7*d.*; Lindley's "Flora Medica," 4*s.* 6*d.*, published 18*s.*; Oliver's "Botany," 2*s.* 8*d.*; Griffith's "Botanical Diagnosis," 1*s.*; Smith's "Guide," new, 4*s.* 6*d.*; Bidlake's "Introduction to Science," 1*s.*; "Lessons in Physical Science," new, 2*s.* 3*d.*; Hardwick's "Natural Philosophy," 1*s.* 6*d.*; Bateman's "Magnacopœia," 2*s.* 6*d.*; Kelly's "Chemist's Directory," new, 7*s.*, published 12*s.* 6*d.*; set of books for Preliminary, 8*s.*; Taplin "On the Horse," 1*s.* 6*d.*; Hoyle's "Games," 2*s.*; burette, 2*s.* 6*d.*; urinometer, 5*s.*; G. M. J., Grove Lodge, Balham, Surrey.

2 ft. 4 long 2 ft. 4 high mahogany desk screen; 2 ft. 8 long mahogany desk, with screen in front and ornamental gold writing; 6 ft. long mahogany desk, with stand, as 226 Maw's; 4 ft. long mahogany writing table, as 223 Maw's; 3 mahogany shop chairs; 9½ ft. long mahogany wall case, as 201 Maw's; 9 ft. long mahogany wall case, as Treble's 123; 3 ft. 2 long and 1 ft. 10 long mahogany wall cases, 4 ft. 3 high; 5 ft. long ditto; 5 ft. 4 long mahogany wall case, with 30 gold-labelled drawers under, 7½ ft. high; 2 ft. 7 long mahogany wall case, 5 ft. 9 high; two 18 in. long, 2 ft. 9 high, 3½ in. deep mahogany wall or counter cases; 7½ ft. long nest handsome mahogany gold-labelled shop drawers, with glass knobs and lockers; 2 ft. 4 long mahogany grained shop drawers, with lockers under; 2 ft. 4 long nest 20 painted drab gold-labelled shop drawers; mahogany gold-numbered label chest, as Treble's 66; 7½ ft. long mahogany-top counter; one 6 ft. long, one 8 ft. long handsome mahogany-top and panel-fronted counters; one 11½ ft. long, one 11 ft. long mahogany-top counter, with drawers; one 8½ ft. long mahogany-top counter, with a 6 ft. 4 long return end counter; 3 ft. long dispensing screen, as Maw's 155; 6 ft. long mahogany dispensing screen, as 132 Treble's; 13 ft. long handsome wall-fitting, with gold-labelled drawers, 2 lockers under, similar to 90 Treble's; handsome carved pharmaceutical arms, by Treble, 4 ft. 6 by 4 ft. 4; two handsome new gold-labelled specie jars, with circular mahogany stands, 30 in. high; one new handsome specie jar, with royal arms, 27 in. high; 20 handsome gold-labelled show jars, as figs. A and D Maw's, various sizes; twelve 1 and 2 lb. lozenge jars, as fig. 1 Maw's; 6 ft. long mahogany bent glass show case, as 102 Maw's; 3 ft. long bent glass show cases, as 41 and 100 Maw's; one 3 ft. long show case, as 10 Treble's; three mahogany upright counter cases, various sizes; one 3 ft. 6 long, one 2 ft. 6 long flat mahogany show cases; ruby shop lamp and bracket, similar to fig. 6 Maw's; fifteen 2, 3, 4, 8 gallon pear shape carboys; handsome gilt moulded drawing room cornice, 12½ ft. long; 6 drawing room fenders, various sizes; 550 6, 10, 20, 30, 40, 60 oz. gold-labelled shop bottles; 136 gold-labelled shop jars, various sizes. Lloyd Rayner, 333 Kingsland Road, London, N.

Binocular microscope, with lever stage and polarised apparatus, in case, cost 18*l.*, price 10*l.*, quite new; large first-class magic lantern, 3½ condensers, with 100 miscellaneous coloured photos, 30 plain ditto, 18 comic, movable two lovers in case, price only 8*l.* 10*s.*, cost double. Chemicus, 151 Hoxton Street, N.

Stomach pump and enema combined, with numerous appliances, in mahogany box, fig. 29 Maw's catalogue, quite new, 22*s.*; breast pump, fig. 4 Maw's catalogue, 4*s.*; set of new tooth scaling instruments, 5*s.*; small but powerful microscope, 3 powers, forceps, condenser, &c., 12*s.*; also Watson's "Practice of Physic," 8*s.* 6*d.*; Good's "Study of Medicine," 10*s.* 6*d.*; Bateman's "Skin Diseases," 3*s.* 6*d.*; Squire's "Skin Diseases," 10*s.* 6*d.*; Langston Parker's "Syphilis," 6*s.*; "Diseases of Infants," Billard's, 7*s.* 6*d.*; Braithwaite's "Retrospect of Medicine," 12 vols., 15*s.*; "Pharmacopœias," 1851 (Phillip's translation), 3*s.* 6*d.*; 1864, 1*s.* 6*d.*; 1867, 3*s.* R. Halford, Chemist, New John Street, Birmingham.

Carriage paid. Miller's "Chemistry," 2nd edition, 3 vols., 20*s.*; Bentham's "Flora," uncut, 2 vols., 30*s.* (published at 3*l.* 10*s.*); "Chemist and Druggist," 1867 to 1875, numbers, 21*s.*; Squire's "Three Pharmacopœias," 4*s.* 6*d.*; Skey's "Operative Surgery," 1858, 10*s.* (published at 18*s.*); Odling's "Chemical Facts," uncut, 3*s.* 6*d.*; Wilson's "Anatomist's Vade Mecum," 150 engravings, 3*s.* 6*d.*; Lindley's "Introduction, Botany," 4*s.* (published at 12*s.*); Markham's "Diseases of Heart," 3*s.*; Marcet's "Calculus," 2*s.* 6*d.*; Thornton's "Botany," 100 plates, 6*s.*; Quain's "Anatomy," 5*s.* (published at 18*s.*); Hunt's "Cure of Stammering," 2*s.* 6*d.*; Smith's "English Flora," 3 vols., 6*s.*; "The Chemist," first 4 vols., 8*s.*; Vogel's "Pathological Anatomy," coloured plates, 5*s.* (complete); "Celsus" and Grieve's Translation, 4*s.* 6*d.*; Hughes' "Auscultation," 2*s.* 6*d.* Letters only, to M. Percy, 24 Whitcomb Street, Leicester Square, London, W.C.

WANTED.

Squire's "Companion." State price. 20/151.

Southall's cabinet. G. M. J., Grove Lodge, Balham, Surrey.

Pair specie jars, gilt tops, 30 inches high. 146/38.

Electric machine, circular glass, mahogany stand, also air pump. Particulars to R. C., Chemist, Stokesley.

A few Perrett's feeding bottle breasts, large, good condition. 4/153.

A writing table, as Maw's fig. 221 or 222, in good condition, and low price. Griffiths, Chemist, Merthyr.

A second-hand dentist's chair, in good condition, must be cheap. D. Davids, Heytesbury.

A few dozen second-hand tinct. and powder bottles, each 40 oz. or 60 oz., with or without labels. Modern shapes. 24/50.

Six glass cells for Stohrer's 14-celled battery; 24 of Smee's cells, complete. Send price and particulars. Chemist, 62 Hackford Road, North Brixton.

Brass enema apparatus, splints, galvanic and electro-magnetic machines, a largest sized composition mortar. Whitfield, Scarbro'.

Female Drummers.—The Toronto *Monetary Times* says:—"Female trade 'drummers' have made their appearance in some places. They are piquant, audacious, and fascinating, and business men are not returning to their families as early in the evening as usual, as they have to inspect the samples."

FLOOD, fraud, and failure, says one of our chief chemical brokers in his annual circular, have characterised the progress of the past year, and whatever may be the reputation which 1875 leaves to posterity, politically or socially, the most amiable of historians will hardly credit it with any halo of commercial glory. All the results of the over-trading which naturally mingled with the brilliant years of 1871-2-3, and the reaction necessarily consequent on such a period of unusual animation, seem to have met together during 1875. These of themselves were ample to ensure a year of the most respectable dulness, but they were minor contributions to the exceptional ill-fame which surrounds our departed acquaintance. The actual and probable collapse, financially, of many of our most faithful borrowers among the nations of the earth has disturbed our money market to an almost unprecedented degree. Investors to whom less than 10 per cent. is unattractive have been driven to their wits' ends, a condition which they plainly manifest by still buying Turkish bonds at any price whatever, and by lending money to another monarch for the express reason that he has sold off the best piece of property which remained to him in order to be able to pay the interest on his overwhelming debts. The blessings to result from the purchase by the English Government of half the shares in the Suez Canal have assuredly been abundantly discounted by this time, but reviewers of the year, in their laudable desire to find something pleasant to say, assure us still that that purchase "secures, in the event of possible hostilities in or encroachments upon our great empire in the East, a position of the utmost importance to us as a maritime power." We are glad to hear it: but, for our own part, we shall be agreeably disappointed in any foe who will be restrained from interfering with our use of the great Canal merely out of respect for our 176,000 shares in the enterprise.

Private bankruptcies have united with national ones to blacken the period over which we now cast a retrospective glance. The liabilities of British and American firms which failed during 1875 would reach a grand total of some fifty or sixty millions if marshalled in one column.

In spite of this melancholy history, added to a considerable falling off in export trade, of which we shall have to speak immediately, it is gratifying to observe the steadiness of our national revenues. The Chancellor of the Exchequer estimated the revenue of the year, from April to April, at 75,625,000*l.* In the first three quarters of the financial year the income has been 53,412,046*l.*; it would thus require only 22,212,954*l.* to make up the total. In the last quarter of the last financial year the amount received was 22,963,147*l.* Should the collection be equal to this in the current quarter, the Chancellor's estimate would be exceeded by about 750,000*l.*

Looking now at the results of our foreign commerce, we notice that the declared value of our exports for the past year was 223,494,570*l.*, as against 239,558,121*l.* in 1874, and 255,164,603*l.* in 1873. During the same period our imports have been nearly 4 millions more than in 1874, and about 2½ millions more than in 1873. We have no stock-sheet of our property as a nation, nor can we say for certain to what extent foreign securities held by Englishmen have depreciated. But if the value of these is lower, of which we presume there can be no doubt, the conclusion seems inevitable that England as a whole is poorer this January than it was twelve months back. We hope our readers as a rule find themselves exceptions.

The chemical trade has not contributed much to the general decline in the value of British exports. Our chief product in this line, alkali, has been exported to the value of 2,300,092*l.*, against 2,618,034*l.*, and 2,929,006*l.* in 1873 and 1874 respectively. But this difference is more than attributable to a fall in price, as the actual tonnage has advanced from year to year. The other item in the official returns bearing on this subject, namely, chemical products or preparations unenumerated, shows the following satisfactory result as to the total value of the exports:—1873, 1,754,797*l.*; 1874, 2,143,049*l.*; 1875, 2,190,454*l.*

The fall in the value of chemical products all round during the twelve months has been quite remarkable. The annexed table will indicate how universal this decline has been:—

		Opened Jan. 1.			Closing Dec. 31.		
		£	*s.*	*d.*	£	*s.*	*d.*
Soda Ash..	deg.	0	0	2	0	0	1¾
Caustic Soda, white, 60 per cent. ..	ton	14	10	0	12	10	0
Soda Crystals, gross weight	,,	4	5	0	3	15	0
Acids—Citric	lb.	0	3	4	0	2	10
Oxalic	,,	0	0	6¾	0	0	5
Tartaric	,,	0	1	7	0	1	5
Sulphate of Ammonia	ton	18	10	0	18	5	0
Arsenic, white powdered	,,	13	10	0	13	0	0
Bleaching Powder	,,	9	0	0	6	15	0
Brimstone, best thirds	,,	6	15	0	6	15	0
Red Lead	,,	26	0	0	24	0	0
Brown Sugar of Lead	,,	28	10	0	26	10	0
Potash—Carbonate	,,	27	0	0	24	10	0
Chlorate	lb.	0	0	10½	0	0	9
Yellow Prussiate	,,	0	1	2½	0	1	0
Alum	cwt.	0	8	3	0	7	6
Ammonia, Carbonate	lb.	0	0	7	0	0	5
Borax, English refined	cwt.	3	8	0	2	13	0
Cream of Tartar	,,	5	14	0	5	10	0
Iodine	oz.	0	0	8	0	0	6
Quicksilver	bottle	24	0	0	11	0	0
Saltpetre, refined	cwt.	1	6	6	1	3	6
Sulphate of Copper	,,	1	6	0	1	5	0

Many of the prices at which chemicals are now quoted are decidedly unremunerative, and manufacturers are indisposed to make forward contracts at the same rates. Oxalic acid, for instance, has been reduced to a price which renders profit quite hypothetical, and this is due entirely to a severe competition at present existing between several well-known manufacturers. It may reasonably be expected that the differences will be patched up before long, in which event a rise is certain. Bleaching powder, on the other hand, has declined in value for quite legitimate reasons, the production having been greatly increased and rendered more economical by the general adoption of Weldon's patent process, and it is said that in this staple makers are willing to accept contracts for forward delivery. Iodine is still checked in price by arrivals of Peruvian, which seems to keep up its reputation, while the vagaries of quicksilver are not dependent on any but private circumstances. Quinine has kept fairly steady all through the year, the absence of any large Government demands contributing to this quiescent condition.

We have commented on opium at various times of late, and now again refer to its unusually low price, a result which we anticipated for our readers early in the summer. According to Mr. Albert Mann's circular, the 1875 crop reached a total of 7,000 cases, which, compared with the 2,300 of 1874, sufficiently accounts for the present quotations. The general quality, however, is said to be much below the average. The following is from Mr. Mann's circular, and his conclusions will be found to coincide very closely with what we have ourselves previously written:—

"The total shipments reported from Smyrna since the new crop came to hand are about 3,700 cases, showing that nearly half the crop is still to come forward, though probably some quantity will be held back by growers till the out-turn of the 1876 crop is known. The winter sowings are said to be progressing favourably, but it is far too early to attach any importance to such news. It is a question, however, if the large drafts on the population for military purposes, necessitated by the disturbances in the European provinces, may not interfere with the agricultural production; if so, opium cultivation, being very considerably a question of labour, would greatly suffer. Reviewing the reports from the principal consuming markets, it appears that in China there is no present demand; stock about 100 cases, and the quantity that has as yet been sent to Java by the Draft Company is under the wants for the season. In the South American markets the demand continues as usual, though the stocks are reported large. In the United States the article is quiet, with fair stocks; but as the American buyers at Smyrna continue to operate largely, it would seem that they had confidence in the article. In this market the extra large purchases by the trade shows that buyers have to some extent bought in advance of their requirements. The total consumption of all kinds cannot be put above 5,000 cases per annum, so that the present supplies are more than the requirements for the next seven months; but the price is so low—and probably unremunerative to the growers—that any extra demand or check in the favourable reports of the growing crop—which, from the sensitiveness of the plant, may at any time occur—would at once produce speculation and a rise in values; any changes, therefore, that take place between this and April next will most probably be upwards."

OILS.—Olive commenced the year with not more than one-fifth of the average stock of the four previous years, and no improvement took place in the prices of this article during the first six months, the small parcels which came in from time to time being sufficient to supply the wants of consumers. In July and August, however, prices at the foreign ports began to improve, and when at last the demand came, a rapid rise of 4*l.* to 4*l.* 10*s.* per tun took place here, which has been maintained ever since, though for the last few weeks very little business has been passing. The importations during the past twelve months consist chiefly of steamer parcels of Lisbon, Bari, Palermo, Corfu, and Dalmatian oils, with one cargo of Gioja, Catanzaro, Mytelene, Corfu, and Tunis respectively; Mogador also sent a fair quantity of oil during the first six months of the year, after which shipments from this quarter ceased entirely. There has not been a single arrival of Gallipoli or any Spanish oils, the prices of the latter having been throughout the year far too high to admit of any chance of business. Crude sperm oil advanced from 103*l.* at the beginning of the year to 110*l.* to 112*l.* in April, remained steady during June and July at 110*l.*, but then declined until the end of October, when 90*l.* to 92*l.* was accepted for fine quality, but prices having since advanced very materially in America, our market has responded, and holders are asking 98*l.* to 100*l.* per tun. Our supply of whale oil last year was quite insignificant, being only 80 tuns, and of that only a very small proportion of good quality. Of seal oil the import into London direct from Newfoundland and Jersey was 664 tuns, and cod 1,113 tuns. There were but trifling variations in the value of the two former during the year, and also of cod until lately, when, in consequence of the very short catch of codfish at Newfoundland this season, the price of cod oil advanced to 44*l.* in November, and is now firm at 44*l.* 10*s.* to 45*l.* per tun. Linseed has been steady. Rape has been lately sent up in price by "bulling" speculations in Paris, which have accumulated a stock of over 20,000 tons there. Palm oil is rather higher. Turpentine has fluctuated somewhat, having reached a very low price in September, when speculators were tempted, and the year closed at 25*s.* to 25*s.* 6*d.* for American. The stock of petroleum in London on January 1, 1876, was 30,000 gallons, as compared with about four times that quantity at the commencement of 1875. The market closes with prices at 1*s.* per gallon for first-class burning oil of the proper standard as regards test.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.	1876.					1875.				
ACIDS—	s.	d.		s	d.	s.	d.		s.	d.
Acetic ... per lb.	0	4	to	0	4½	0	4	to	0	0
Citric ... ,,	2	10½	..	2	11	3	4	..	0	0
Hydrochlor ... per cwt.	5	0	..	7	0	4	0	..	7	0
Nitric ... per lb.	0	5	..	0	5½	0	5	..	0	5½
Oxalic ... ,,	0	5	..	0	0	0	6	..	0	7
Sulphuric ... ,,	0	0¾	..	0	1	0	0¾	..	0	1
Tartaric crystal .. ,,	1	6	..	0	0	1	7	..	0	0
powdered ,,	1	6	..	1	6½	1	7	..	0	0
ANTIMONY ore ... per ton	280	0	..	300	0	250	0	..	270	0
crude .. per cwt.	38	0	..	0	0	40	0	..	0	0
star ... ,,	59	0	..	0	0	52	0	..	53	0
ARSENIC, lump ... ,,	27	6	..	28	0	0	0	..	0	0
powder ... ,,	13	3	..	0	0	0	0	..	0	0
BRIMSTONE, rough ... per ton	145	0	..	0	0	150	0	..	160	0
roll .. per cwt.	10	0	..	10	3	10	0	..	0	0
flour ... ,,	12	6	..	14	0	11	6	..	12	6
IODINE, dry ... per oz.	0	6	..	0	0	0	8	..	0	0
IVORY BLACK, dry .. per cwt.	8	6	..	0	0	8	6	..	0	0
MAGNESIA, calcined .. per lb.	1	6	..	0	0	1	6	..	0	0
MERCURY ... per bottle	210	0	..	0	0	480	0	..	0	0
MINIUM, red ... per cwt.	24	6	..	25	0	24	6	..	0	0
orange .. ,,	37	0	..	0	0	36	0	..	0	0
PRECIPITATE, red . per lb.	4	9	..	0	0	7	3	..	0	0
white ,,	4	8	..	0	0	7	2	..	8	0
PRUSSIAN BLUE .. ,,	0	0	..	0	0	0	0	..	0	0
SALTS—										
Alum ... per ton	147	6	..	155	0	165	0	..	175	0
powder ... ,,	165	0	..	167	6	185	0	..	0	0
Ammonia :										
Carbonate ... per lb.	0	5	..	0	5¼	0	7	..	0	7¼
Hydrochlorate, crude, white ... per ton	570	0	..	650	0	640	0	..	0	0
British (*see* Sal Am.)										
Sulphate ... per ton	375	0	..	380	0	360	0	..	375	0
Argol, Cape ... per cwt.	85	0	..	96	0	90	0	..	99	0
Red ... ,,	71	0	..	95	0	76	0	..	95	0
Oporto, red . ,,	33	6	..	34	0	32	0	..	33	0
Sicily ... ,,	60	0	..	62	6	60	0	..	63	0
Ashes (*see* Potash and Soda)										
Bleaching powd ... per cwt.	7	9	..	8	0	9	9	..	10	0
Borax, crude ... ,,	40	0	..	60	0	45	0	..	70	0
British refnd. ,,	53	0	..	0	0	60	0	..	0	0
Calomel ... per lb.	4	3	..	0	0	6	9	..	0	0
Copper :										
Sulphate ... per cwt.	24	6	..	25	0	25	6	..	26	0
Copperas, green .. per ton	65	0	..	70	0	65	0	..	70	0
Corrosive Sublimate p. lb.	3	7	..	0	0	6	0	..	0	0
Cr. Tartar, French, p. cwt.	109	0	..	110	0	112	0	..	0	0
brown ,,	90	0	..	92	6	90	0	..	95	0
Epsom Salts ... per cwt.	5	3	..	6	6	5	6	..	6	6
Glauber Salts ... ,,	4	6	..	5	6	6	6	..	7	0
Lime :										
Acetate, white, per cwt.	11	0	..	20	0	13	0	..	21	0
Magnesia : Carbonate ,,	42	6	..	45	0	42	6	..	45	0
Potash :										
Bichromate ... per lb.	0	5	..	0	0	0	6½	..	0	0
Carbonate :										
Potashes, Canada, 1st sort ... per cwt.	28	0	..	28	6	36	0	..	36	6
Pearlashes, Canada, 1st sort ... per cwt.	32	6	..	33	0	40	0	..	40	6
Chlorate ... per lb.	0	8	..	0	9	0	10	..	0	10½
Prussiate ... ,,	1	0	..	1	0¼	1	2	..	1	3
red ... ,,	3	2	..	3	3	3	2	..	3	3
Tartrate (*see* Argol and Cream of Tartar)										
Potassium :										
Chloride ... per cwt.	7	0	..	0	0	7	0	..	0	0
Iodide ... per lb.	8	3	..	0	0	9	8	..	0	0
Quinine :										
Sulphate, British, in bottles ... per oz.	6	6	..	6	9	7	0	..	0	0
Sulphate, French ,,	6	2	..	0	0	7	0	..	0	0
Sal Acetos ... per lb.	0	8	..	0	8½	0	10	..	0	0
Sal Ammoniac, Brit. cwt.	44	0	..	45	0	44	0	..	45	0
Saltpetre :										
Bengal, 6 per cent. or under ... per cwt.	19	0	..	19	6	21	6	..	21	9
Bengal, over 6 per cent. per cwt.	18	0	..	19	0	20	0	..	21	3
British refined ,,	22	0	..	23	0	25	0	..	26	0
Soda : Bicarbonate, p. cwt.	11	0	..	0	0	13	9	..	0	0
Carbonate :										
Soda Ash .. per deg.	0	1⅞	..	0	0	0	2⅛	..	0	0
Soda Crystals per ton	82	6	..	0	0	95	0	..	0	0
Hyposulphite, per cwt.	0	0	..	0	0	0	0	..	0	0
Nitrate ... per cwt.	11	6	..	0	0	13	0	..	0	0
SUGAR OF LEAD, White cwt.	40	0	..	0	0	42	0	..	44	0
SUGAR OF LEAD, Brown, cwt.	27	0	..	0	0	38	0	..	39	0
SULPHUR (*see* Brimstone)										
	s.	d.		s.	d.	s.	d.		s.	d.
VERDIGRIS ... per lb.	1	1	to	1	5	1	1	to	1	5
VERMILION, English ,,	3	6	..	0	0	6	4	..	0	0
China ,,	0	0	..	0	0	5	6	..	5	7
DRUGS.										
ALOES, Hepatic ... per cwt.	60	0	..	160	0	60	0	..	180	0
Socotrine .. ,,	65	0	..	205	0	102	6	..	240	0
Cape, good .. ,,	36	0	..	39	0	36	0	..	39	0
Inferior ... ,,	30	0	..	34	6	29	0	..	35	0
Barbadoes .. ,,	42	6	..	210	0	50	0	..	187	6
AMBERGRIS, grey ... oz.	40	0	..	55	0	50	0	..	60	0
BALSAM—										
Canada ... per lb.	0	0	..	0	0	1	10	..	2	0
Capivi ... ,,	0	0	..	0	0	2	7	..	2	10½
Peru ... ,,	0	0	..	0	0	7	0	..	7	3
Tolu ... ,,	0	0	..	0	0	4	0	..	4	1
BARKS—										
Canella alba ... per cwt.	16	0	..	27	0	16	0	..	27	0
Cascarilla ... ,,	18	0	..	22	6	19	0	..	23	0
Peru, crown & grey per lb.	1	0	..	3	0	0	11	..	2	4
Calisaya, flat ,,	2	6	..	4	4	2	8	..	5	0
.. quill ,,	2	6	..	4	4	2	8	..	5	0
Carthagena ,,	0	8	..	2	3	0	6	..	2	0
E. I. ... ,,	1	0	..	4	6	1	0	..	4	6
Pitayo ... ,,	0	6	..	1	9	0	4	..	2	0
Red ... ,,	1	0	..	4	6	1	0	..	3	6
Buchu Leaves ... ,,	0	1¼	..	1	1	0	2	..	1	0
CAMPHOR, China .. per cwt.	70	0	..	72	6	70	0	..	72	6
Japan .. ,,	0	0	..	0	0	74	0	..	75	0
Refin. Eng. per lb.	1	0½	..	1	1	1	1½	..	0	0
CANTHARIDES ... ,,	3	6	..	5	0	3	0	..	5	0
CHAMOMILE FLOWERS p. cwt.	35	0	..	60	0	35	0	..	50	0
CASTOREUM ... per lb.	6	0	..	26	0	6	0	..	24	0
DRAGON'S BLOOD, lp. p. cwt.	130	0	..	200	0	80	0	..	220	0
FRUITS AND SEEDS (*see also* Seeds *and* Spices).										
Anise, China Star per cwt.	110	0	..	115	0	115	0	..	117	6
Spanish, &c. ,,	38	0	..	40	0	15	0	..	28	0
Beans, Tonquin ... per lb.	1	6	..	3	6	3	2	..	3	4
Cardamoms, Malabar good ... ,,	4	3	..	5	11	4	11	..	5	6
inferior ... ,,	1	0	..	3	9	2	0	..	4	10
Madras ... ,,	2	6	..	3	10	2	5	..	3	6
Ceylon ... ,,	5	8	..	6	0	4	0	..	5	6
Cassia Fistula ... per cwt.	8	0	..	14	6	14	0	..	15	0
Castor Seeds ... ,,	10	0	..	10	6	7	0	..	11	6
Cocculus Indicus ,,	13	6	..	16	0	14	0	..	16	0
Colocynth, apple .. per lb.	0	6	..	0	11	0	10	..	0	11
Croton Seeds ... per cwt.	32	0	..	0	0	44	0	..	0	0
Cubebs ... ,,	26	0	..	27	0	21	6	..	23	0
Cummin ... ,,	19	0	..	24	0	21	0	..	28	0
Dividivi ... ,,	12	0	..	15	0	11	0	..	15	0
Fenugreek ... ,,	13	0	..	21	0	8	0	..	16	0
Guinea Grains .. ,,	22	6	..	0	0	25	0	..	27	0
Juniper Berries ,,	10	0	..	11	6	9	0	..	10	6
Nux Vomica .. .. ,,	7	0	..	12	6	7	0	..	13	0
Tamarinds, East India ,,	13	0	..	20	0	18	0	..	20	0
West India ,,	9	0	..	16	0	11	0	..	18	0
Vanilla, large ... per lb.	60	0	..	71	0	60	0	..	79	0
inferior ,,	30	0	..	49	0	50	0	..	59	0
Wormseed per cwt.	0	0	..	0	0	0	0	..	0	0
GINGER, Preserved, per lb.	0	7	..	0	10¼	0	6½	..	0	10
HONEY, Chili ... per cwt.	48	0	..	60	0	48	0	..	66	0
Jamaica ,,	44	0	..	52	0	50	0	..	58	6
Australian ,,	45	0	..	60	0	40	0	..	56	0
IPECACUANHA ... per lb.	3	11	..	4	7	3	5	..	3	10
ISINGLASS, Brazil .. ,,	2	2	..	4	7	2	10	..	5	7
Tongue sort ,,	2	7	..	5	4	3	0	..	5	8
East India ,,	1	9	..	5	0	1	0	..	5	6
West India ,,	4	1	..	4	7	5	0	..	5	6
Russ. long staple	12	0	..	15	0	8	6	..	13	0
,, inferior	0	0	..	0	0	4	0	..	8	0
,, Simovia	3	0	..	4	0	3	3	..	5	0
JALAP, good ... ,,	0	8	..	0	9	0	9	..	0	10
infer. & stems ,,	0	6¾	..	0	7¾	0	8	..	0	9
LEMON JUICE ... per degree	0	1	..	0	2	0	2¾	..	0	0
LIME JUICE ... per gall.	1	6	..	2	0	1	6	..	2	0
LIQUORICE, Spanish per cwt.	0	0	..	0	0	40	0	..	70	0
Liquorice Root ,,	15	0	..	30	0	11	0	..	16	0
MANNA, flaky ... per lb.	5	6	..	6	0	2	6	..	3	0
small ... ,,	1	6	..	1	9	1	2	..	1	5
MUSK, Pod ... per oz.	15	0	..	50	0	20	0	..	45	0
Grain ... ,,	37	0	..	62	0	46	0	..	60	0
OILS (*see also separate list*)										
Almond, expressed per lb.	1	2	..	0	0	1	0	..	0	0
Castor, 1st pale ... ,,	0	4¼	..	0	4½	0	5	..	0	0
second ... ,,	0	3½	..	0	4	0	4	..	0	4½
infer. & dark ,,	0	3	..	0	0	0	4	..	0	4¼
Cod Liver ... per gall.	4	0	..	7	3	4	0	..	6	0
Croton ... per oz.	0	2½	..	0	0	0	3	..	0	4
Essential Oils :										
Almond ... per lb.	24	0	..	25	0	22	0	..	0	0
Anise-seed ... ,,	7	9	..	0	0	9	0	..	0	0
Bay ... per cwt.	0	0	..	0	0	65	0	..	70	0
Bergamot ... per lb.	10	0	..	21	0	10	0	..	25	0
Cajeput ... per bottle	2	4	..	2	9	2	4	..	2	8
Caraway ... per lb.	9	0	..	9	3	5	3	..	6	0
Cassia ... ,,	4	0	..	4	1	4	8	..	0	0
Cinnamon ... per oz.	1	0	..	6	6	1	0	..	8	0
Cinnamon-leaf .. ,,	0	2	..	0	3¼	0	1	..	0	3
Citronelle ... ,,	0	1⅝	..	0	2	0	1⅝	..	0	2
Clove ... per lb.	10	0	..	10	3	10	3	..	0	0
Juniper ... ,,	1	10	..	0	0	1	3	..	2	0
Lavender ... per lb.	7	0	..	15	0	1	10	..	5	0
Lemon ... ,,	7	0	..	11	0	7	0	..	11	6

	1876.		1875.	
Essential Oils, *continued*:—	s. d.	s. d.	s. d.	s. d.
Lemongrass ....per oz.	0 2¾	0 0	0 3¾	0 4
Neroli .... ,,	0 4	3 0	0 4	3 0
Nutmeg .... ,,	0 7	0 0	0 7	0 8
Orange..........per lb.	6 0	9 0	8 0	10 0
Otto of Roses....per oz.	13 0	25 0	15 0	22 0
Patchouli ...... ,,	2 0	3 6	2 9	4 0
Peppermint:				
American ....per lb.	16 0	16 9	22 0	23 6
English ...... ,,	32 0	34 0	29 0	32 0
Rosemary ...... ,,	1 4	1 10	1 4	1 10
Sassafras ...... ,,	2 3	2 6	2 0	3 0
Spearmint ...... ,,	12 0	19 0	6 0	18 0
Thyme.......... ,,	1 9	2 0	1 9	2 0
Mace, expressed ..per oz.	0 7½	0 10	0 3	0 3½
OPIUM, Turkey ......per lb.	21 0	22 0	38 0	40 0
inferior ...... ,,	14 0	18 0	20 0	37 0
QUASSIA (bitter wood) per ton	100 0	200 0	0 0	0 0
RHUBARB, China, good and fine ....per lb.	4 0	4 8	1 11	5 9
Good, mid. to ord. ,,	0 9	3 6	0 3	1 6
Dutch trimmed ,,	0 0	0 0	0 0	0 0
Russian .... ,,	0 0	0 0	0 0	0 0
ROOTS—Calumba..per cwt.	23 0	26 0	17 0	23 0
China .... ,,	19 0	24 0	18 0	20 0
Galangal.......... ,,	19 0	23 0	18 0	23 0
Gentian .... ,,	22 0	23 0	17 0	19 0
Hellebore .... ,,	0 0	0 0	30 0	33 0
Orris .... ,,	26 0	75 0	30 0	70 0
Pellitory.......... ,,	38 0	39 0	38 0	39 0
Pink ....per lb.	0 10	1 3	1 0	1 3
Rhatany.......... ,,	0 4	1 0	0 4	1 10
Seneka............ ,,	3 5	4 2	4 0	4 10
Snake .... ,,	0 8	1 0	1 0	1 9
SAFFRON, Spanish .. ,,	30 0	35 0	22 0	26 0
SALEP ....per cwt.	0 0	0 0	170 0	200 0
SARSAPARILLA, Lima per lb.	0 0	0 0	0 6	0 9
Para.............. ,,	0 0	0 0	1 0	1 3
Honduras .... ,,	1 2½	1 10	1 6	2 0
Jamaica .... ,,	2 0	3 0	1 9	2 6
SASSAFRAS ....per cwt.	0 0	0 0	13 0	14 0
SCAMMONY, Virgin ..per lb.	32 0	45 0	25 0	36 0
second & ordinary ,,	8 0	24 0	7 0	24 0
SENNA, Bombay .... ,,	0 1	0 4	0 1	0 5
Tinnivelly .... ,,	0 1½	0 10	0 1½	1 0
Alexandria........ ,,	0 7	2 6	0 3½	1 5
SPERMACETI, refined ,,	1 6	0 0	1 2	1 3
American .... ,,	1 2	0 0	1 0	1 1
SQUILLS............ ,,	0 3½	0 4½	0 1¾	0 3¾

GUMS.

	1876.		1875.	
	£ s.	£ s.	£ s.	£ s.
AMMONIACI drop .. per cwt.	2 5	2 10	4 15	6 0
lump.. ,,	1 6	1 10	3 10	4 10
ANIMI, fine washed ,,	11 0	13 0	13 10	15 10
bold scraped ,,	9 10	10 5	10 15	13 10
sorts ...... ,,	7 0	9 0	6 10	10 10
dark ...... ,,	4 2/6	8 0	5 10	6 10
ARABIC, E.I., fine pale picked .. ,,	3 5	3 15	2 18	3 10
srts., md. to fin. ,,	1 8	3 2/6	1 16	2 16
garblings .. ,,	0 19	1 15	0 19	1 10
TURKEY, pick. gd. to fin. ,,	6 0	9 0	7 0	11 0
second & inf. ,,	2 10	5 10	3 0	6 15
in sorts .. ,,	1 10	2 0	1 10	2 15
Gedda .... ,,	1 1	1 8	1 0	1 8
BARBARY, white .. ,,	0 0	0 0	0 0	0 0
brown .. ,,	1 9	1 16	1 6	1 12
AUSTRALIAN...... ,,	1 17	2 6	1 4	2 8
ASSAFŒTIDA, cm. to fin ,,	0 18	1 16	0 9	2 4
BENJAMIN, 1st & 2nd ,,	10 0	30 0	12 0	22 0
Sumatra 1st & 2nd ,,	7 10	12 0	7 10	12 0
3rd	3 10	5 0	2 7/6	4 5
COPAL, Angola red ,,	6 0	6 15	5 10	5 15
Benguela ,,	4 0	5 0	3 10	4 10
	s. d.	s. d.	s. d.	s. d.
Sierra Leone, per lb.	0 7½	0 11	0 4½	0 10½
Manilla....per cwt.	13 0	28 0	14 0	26 0
DAMMAR, pale .... ,,	57 0	60 0	0 0	0 0
Singapore .... ,,	57 0	60 0	55 0	54 0
EUPHORBIUM .... ,,	12 0	20 0	11 0	15 0
GALBANUM .... per lb.	1 0	1 6	1 6	2 0
GAMBOGE, pckd. pipe per cwt.	180 0	235 0	180 0	280 0
GUAIACUM ....per lb.	0 6	2 0	0 8	2 6
KINO..............per cwt.	50 0	80 0	60 0	90 0
KOWRIE, rough .. ,,	35 0	54 0	16 0	46 0
scraped sorts ,,	54 0	70 0	47 0	53 0
MASTIC, picked ....per lb.	4 0	5 8	4 6	6 0
MYRRH, gd. & fine per cwt.	172 6	200 0	119 0	280 0
ord. to fair.... ,,	61 0	172 0	80 0	115 0
OLIBANUM, p. drop ,,	58 0	60 0	60 0	68 0
amber & ylw. ,,	45 0	55 0	53 0	60 0
garblings.... ,,	22 0	30 0	20 0	39 0
SENEGAL .... ,,	2 10	2 15	2 0	2 15
SANDARAC .... ,,	85 0	107 6	90 0	100 0
SHELLAC, Orange.. ,,	125 0	200 0	280 0	300 0
Liver .. ,,	112 6	160 0	260 0	287 6
THUS .... ,,	20 0	22 0	21 0	23 0
TRAGACANTH, leaf ,,	300 0	390 0	220 0	390 0
in sorts ,,	25 0	175 0	30 0	190 0

OILS.

	1876.		1875.	
	£ s.	£ s.	£ s.	£ s.
SEAL, pale ....per tun	34 10	0 0	35 0	0 0
yellow to tinged ,,	31 0	34 0	32 0	34 0
brown ...... ,,	29 10	30 0	28 0	29 0
SPERM............ ,,	98 0	100 0	103 0	0 0
COD .... ,,	44 10	45 0	40 10	41 0
Oils, *continued*:—	£ s.	£ s.	£ s.	£ s.
WHALE, South Sea, pale, per tun	34 10 to	35 0	36 0 to	0 0
yellow ,,	32 0	34 0	28 10	35 0
brown ,,	29 0	30 0	26 0	28 0
East India, Fish ,,	23 0	0 0	23 0	0 0
OLIVE, Galipoli ...per ton	0 0	0 0	0 0	0 0
Triesto...... ,,	47 0	0 0	42 10	43 0
Levant .... ,,	0 0	0 0	41 0	0 0
Mogador .... ,,	0 0	0 0	40 5	0 0
Spanish .... ,,	43 10	0 0	0 0	0 0
Sicily ...... ,,	0 0	0 0	42 10	0 0
COCOANUT, Cochin.. ,,	41 10	42 0	43 10	44 0
Ceylon ,,	38 10	39 0	37 15	38 0
Sydney ,,	32 0	38 10	37 0	37 10
GROUND NUT AND GINGELLY:				
Bombay	0 0	0 0	0 0	0 0
Madras	34 0	0 0	35 0	0 0
PALM, fine................	39 0	0 0	35 10	0 0
LINSEED	24 10	0 0	26 0	0 0
RAPESEED, English, pale ..	38 0	38 10	32 5	0 0
brown	36 10	0 0	39 5	0 0
Foreign, pale ..	38 0	39 0	32 10	0 0
brown	0 0	0 0	0 0	0 0
COTTONSEED	27 10	0 0	24 10	0 0
LARD	64 0	0 0	70 0	0 0
TALLOW	30 0	54 0	22 0	28 0
TURPENTINE, American, cks.	25 6	0 0	26 6	0 0
French ,,	25 3	0 0	0 0	0 0
PETROLEUM, Crude	0 0	0 0	0 0	0 0
	s. d.	s. d.	s. d.	s. d.
refined, per gall.	0 11¾	1 0	0 9½	0 9⅞
Spirit ,,	0 10½	0 11	0 10	0 0

SEEDS.

	1876.		1875.	
CANARY............per qr.	180 0	200 0	160 0	0 0
CARAWAY, English per cwt.	44 0	45 0	0 0	0 0
German, &c....	0 0	0 0	18 0	29 0
CORIANDER	12 0	18 0	8 0	18 0
HEMP..............per qr.	36 0	38 0	0 0	0 0
LINSEED, English per qr. ..	61 0	65 0	59 0	66 0
Black Sea & Azof	51 0	0 0	53 0	54 0
Calcutta ,,	52 0	0 0	56 6	0 0
Bombay ,,	54 0	0 0	60 0	61 0
St. Petrsbrg. ,,	53 0	0 0	54 0	56 0
Mustard, brown..per bshl.	0 0	0 0	0 0	0 0
white.. ,,	10 0	13 0	10 0	12 0
POPPY, East India, per qr.	53 0	53 6	54 0	0 0

SPICES.

	1876.		1875.	
CASSIA LIGNEA ..per cwt.	52 0	70 0	56 0	75 0
Vera .... ,,	22 0	44 0	24 0	50 0
Buds .... ,,	95 0	105 0	120 0	122 6
CINNAMON, Ceylon:				
1st quality ......per lb.	2 3	3 9	2 9	4 3
2nd do. .... ,,	2 0	2 11	2 0	3 3
3rd do. .... ,,	1 11	2 6	1 8	2 10
Tellicherry ...... ,,	0 0	0 0	3 3	3 5
CLOVES, Penang .... ,,	2 1	2 2	2 2	2 2
Amboyna .... ,,	1 5	1 6	1 7	1 9
Zanzibar.......... ,,	1 2	1 4	1 0	1 6
GINGER, Jam., fine per cwt.	100 0	202 6	110 0	200 0
Ord. to good .... ,,	62 0	95 0	74 0	100 0
African .... ,,	46 0	47 0	58 0	0 0
Bengal............ ,,	41 0	43 0	50 0	55 0
Malabar .... ,,	40 0	45 0	50 0	0 0
Cochin .... ,,	64 0	120 0	79 0	127 6
PEPPER, Blk, Malabar, per lb.	0 5¼	0 5¾	0 6⅝	0 7½
Singapore .... ,,	0 5	0 0	0 6	0 0
White Tellicherry ,,	0 10	1 4	0 11	1 6
Cayenne .... ,,	3 0	3 4	1 6	3 1
MACE, 1st quality .. ,,	2 3	3 2	3 0	3 8
2nd and inferior .. ,,	1 1	2 2	1 7	3 0
NUTMEGS, 78 to 60 to lb.	3 7	4 6	3 6	4 4
90 to 80 ,,	3 0	3 6	3 3	3 6
132 to 95 ,,	2 8	2 11	2 10	3 2
PIMENTA	0 3¼	0 4	0 3	0 3½

VARIOUS PRODUCTS.

	1876.		1875.	
COCHINEAL—				
Honduras, black ..per lb.	1 10	2 6	1 11	2 10
,, silver .. ,,	1 7	1 10	2 0	2 4
,, pasty .. ,,	1 6	0 0	1 9	1 11
Mexican, black.... ,,	1 8	1 11	1 10	2
,, silver.... ,,	1 7	1 8	1 8	1
Teneriffe, black .. ,,	1 9	3 2	2 0	3 8
,, silver .. ,,	1 8	1 10	1 11	2 2
SOAP, Castile......per cwt.	26 0	33 0	33 0	34 0
SPONGE, Turk. fin. pkd pr lb.	12 0	16 0	12 0	16 0
Fair to good ,,	4 0	11 0	4 0	11 0
Ordinary .. ,,	1 0	3 6	1 0	3 6
Bahama.... ,,	0 6	3 0	0 6	3 6
TERRA JAPONICA—				
Gambier ......per cwt.	25 3	0 0	0 0	0 0
Free cubes .... ,,	39 0	0 0	40 0	44 0
Cutch .... ,,	25 6	26 6	28 6	30 0
WOOD, DYE, Bar ..per ton	£3 10	£4 0	£5 10	6 0
Brazil .... ,,	6 0	24 0	9 0	27 0
Cam.............. ,,	17 0	34 0	33 0	40 0
Fustic, Cuba ...... ,,	9 0	0 0	9 0	9 10
Jamaica .... ,,	6 10	7 0	8 10	9 0
LOGWOOD, Campeachy ,,	10 0	11 0	10 0	10 10
Honduras ...... ,,	7 10	8 0	0 0	6 0
St. Domingo .... ,,	6 10	7 10	5 2/6	5 10
Jamaica .... ,,	6 0	6 10	6 0	7 0
LIMA, first pile .... ,,	9 10	11 0	13 0	14 0
RED SANDERS .... ,,	7 2/6	0 0	6 10	6 15

NOTES AND QUERIES

At the commencement of another volume we may be allowed to "rise to make a few remarks." We cannot undertake to answer every question put to us, nor do we consider ourselves bound to publish any and every query we receive. Neither must we be expected to reply privately on such subjects as are treated in these columns. We will always do our best to serve our subscribers, but we ask them also to assist us in making this department a useful repertory of information for the trade generally. All communications intended for notice in this section must be received not later than the 10th of the month. Gentlemen wishing to puff themselves or their products are requested to make use of our advertising pages.

Irish Pharmacy.—A correspondent comments thus—

'Tis come, then, to a pretty pass.
WORDSWORTH.

Haste, Modified and Minor men,
Whose English hopes are dimmest.
Lo! Erin whispers "Try again!
And be an *Irish* chemist."

J. S.—Please refer to our Editorial Notes this month for exact information relative to the sale of quinine wine.

To Keep Chloride of Lime in Small Packets.—C. T., Stow-on-Wold, writes:—"If 'A. Z.' will first wrap the chloride of lime in ordinary paper, and then in another paper that has been brushed over with boiled oil, and hung up till dry, he will find the lime keep dry for some considerable time."

Doubtful.—It's hard to say what it may be safe to sell now-a-days, but the latest magisterial decision in respect to "citrate of magnesia" is to the effect that the sale of that is legitimate. See THE CHEMIST AND DRUGGIST, November 15, 1875.

C. E. M.—We find the following in an old manuscript possession of ours under the head of "Devonshire Oils." The author does not state whether they be "Pine's" or anyone else's:—

Soft soap, 1 lb.
Dissolve in
Boiling water, 1 gallon.
Add
Bole Armeniac, 1½ oz. or q. s.
℞ Sp. terebinth. Oss.
Liq. vol. c.c. ℥i.
Tinct. camph. ʒss.
Tinct. opii, ʒss.

Mix and make up to a wine-bottle full with the soap solution as above. For scour in lambs add liq. opii ℥j.

Piracy writes: "I am proprietor of a remedy termed 'Golden Purgative,' let us say. Is it necessary to register the name as my 'trade-mark' to secure the same?" This is the difficulty in connection with the new Act to which we alluded last month. If our correspondent should choose to register his title, and his application be admitted, of course all will be well. Suppose he does not register, it is evidently open to any one else to make application. If "Piracy" allows this application to pass without challenging it, he must suffer the consequences. "But," says he, "how am I to know about such applications?" They will be advertised in the *Commissioners of Patents' Journal*, and perhaps in some other journals as well. Common sense would suggest the desirability of advertising them in the usual trade journals. This point, we believe, is not yet decided. In the event of an infringement of trade-mark when neither party has registered the title, we presume the courts will give protection just as at present, though it may be that they will not entertain a question of trade-mark unless the same be registered.

G. T.—There is no law to prevent you "giving" a bottle of wine or brandy to a patient without your being licensed. What the Inland Revenue Commissioners object to is an unlicensed person *selling* the same. We do not think they would be pacified even by your putting it into a dispensing bottle and sticking a medicine label on the outside. If a doctor orders brandy in a mixture, you have a right to supply it; but it is best to avoid anything approaching an illicit trade in excisable goods.

Turpentine.—You are aware perhaps that so-called tinplates are not pure tin, but iron sheets tinned over. Zinc plates are also iron covered with zinc. We should expect, therefore, that salt would be likely to excite galvanic action in either case. Your second question is rather more vaguely put than your first. If we understand you correctly, you wish to know whether a person, having been fined for illegally carrying on business as a chemist and druggist, may, after paying such fine, go on carrying on such business. Certainly not, without rendering himself liable to another prosecution.

T. C.—Lime Cream and Glycerine is usually made by mixing equal parts of lime water and oil of almonds, conscientious manufacturers adding a greater or less proportion of glycerine, to the detriment of the product. A very little tincture of cantharides (ʒi. to the pint) is generally added, and perfume according to fancy. Some chemists make this compound for stock, and label bottles of it, according to requirements, "Lime Cream and Glycerine," or "Glycerine and Lime Juice." Strictly, however, the latter should be prepared thus:—

Lime juice, 10 ozs.
Rose water, 5 ozs.
Glycerine, 2 ozs.
Spirit, 2 ozs.
Ess. lemon, 30 min.

T. A.—We think the medicine, labelled as you show, would not need a stamp unless you recommend it by advertisement or circulars for any complaint.

E. G.—Chemists' assistants get paid about home rates at the Cape, perhaps a little more. In India and China, in a good house, they would get about double, and their expenses would be double also. South America we are not able to speak of.

Azote.—You will get all information respecting London University Examinations from the "London University Calendar," published by Messrs. Taylor & Francis, Red Lion Court, Fleet Street, price 4*s.* Any special information would no doubt be given if you were to apply to the registrar of the London University, London, W.

W. C.—There is nothing to prevent the assumption by a chemist of the title of "veterinary chemist." We are not aware, indeed—we are open to correction—that the title of "veterinary surgeon" is protected. We believe the College Charter only monopolises "Member of the Royal College of Veterinary Surgeons."

W. M.—If you will refer to the abstract of the Medicine Stamp Act in our Diary for 1876 you will see that any lozenges (with certain special exemptions) used as medicines are liable to duty. We certainly should have thought the label you send us would have brought the lozenges within the grace usually accorded by the Commissioners of Inland Revenue, but from their judgment there is no appeal, and as you have appealed to Cæsar, it will be wise to submit to Cæsar's ruling.

Topaz.—Different formulæ for brilliantine were published in our issues of July and November last year. We have not space to reproduce them on this occasion. French paste for artificial brilliants is made in various ways, rock crystal, borax, and white or read lead being the usual ingredients fused. Fontanier's process is said to yield the best results. It is—pure silica, 8 ozs.; salt of tartar, 24 ozs.; mix, bake, and cool; neutralise with nitric acid, washing the substance until it no longer affects litmus papers. Then, having dried it, add 12 ozs. carbonate of lead, and borax in the proportion of 1 part to 12 of the mixture. Triturate in a porcelain mortar, melt, in a clean crucible, pour the fused mass into cold water; dry and powder. Repeat this process a second and third time, using a clean crucible each time, and always separating any reduced lead. Lastly, add 5 drachms of nitre and melt once more.

Dens would be obliged for the form for Erasmus Wilson's hair wash.

Cortex asks for the name of some really good modern handbook of domestic medicine, giving the first symptoms of most diseases and simple remedies for them. Perhaps some one with experience of such a work will kindly recommend it.

Quæsiter.—We think Pitman's phonetic method of shorthand the most perfect. You can get a sixpenny manual (the "Phonographic Manual") from 20 Paternoster Row.

R. T.—If the spots on the glove have been caused by damp we should think it would not be possible to restore the colours. Therefore it would be best to dye them to a dark colour. Black produced by galls and copperas is the easiest to accomplish.

Enquirer asks, "Would ess. menth. pip. made with American oil be an adulteration, or if it was made with half quantity of oil prescribed in B. P.? Would aquas made with oils by rubbing in a mortar come under the Act?" These are subtle questions, which can only be settled authoritatively in a court of justice. If B. P. were ordered in either case, the substitution of any other compound would clearly be unjustifiable; and our impression is that as there is a legally established standard for the preparations named above it would be necessary to state on the label any departure from such standard in order to keep within the letter and the spirit of the law. We recommend Aitken's "Outlines of the Science and Practice of Medicines" 12*s.* 6*d.* (C. Griffin & Co.).

Juvenis (Dawlish).—We cannot suggest any better way of obtaining second-hand the books you want than by advertising in our Exchange Column. You would have them cheap if you could get them for half the published price.

Kerry wants a good formula for "genuine honey cream" for the hair. We know how to make what is called "cream of honey," but as our correspondent is particular about genuineness we must leave the query to the kindness of some reader.

X. Y. Z.—Ung. potassii iodidi is the same as ung. potassæ hydriodatis. It should be a white ointment, but is liable to turn yellow in consequence of the liberation of free iodine. To prevent this, the formula of the British Pharmacopœia prescribes a little carbonate of potash, while in the German Pharmacopœia a similar object is sought by the addition of 1 part of hyposulphite of sodium to 100 parts of ointment. Either of these methods will keep the ointment white, provided a fresh pure lard be employed. Ammonio-citrate of iron is intended when ferri cit. is ordered.

The points raised by *Acacia*, in his letter on trade-marks, will be found generally settled by the publication of the Regulations issued by the Registration Office. We have not, therefore, printed his communication, but his concluding remarks are well worth attention. He asks for a code of honour among pharmaceutists independent of legislative enactments "making us more self-reliant, shunning even the appearance of a label likely to deceive, telling customers plainly when we have not an article, instead of saying—'Oh, yes, I can make it exactly like the other.' Probably in time one might treat his neighbour fairly out of pure love. We could, in anticipation of the Millennium, instruct Dr. Richardson to draw a plan of a new 'Medica' close to the 'Hygeia' lately founded, where no medical man would dispense his own medicines, patents (such as would be allowed) sell at 1*s.* 1½*d.*, not 10½*d.* from the grocer's, a monument in the 'Square' to the council which abolished co-operative dispensing, shutters up at 7 P.M., and contentment all round."